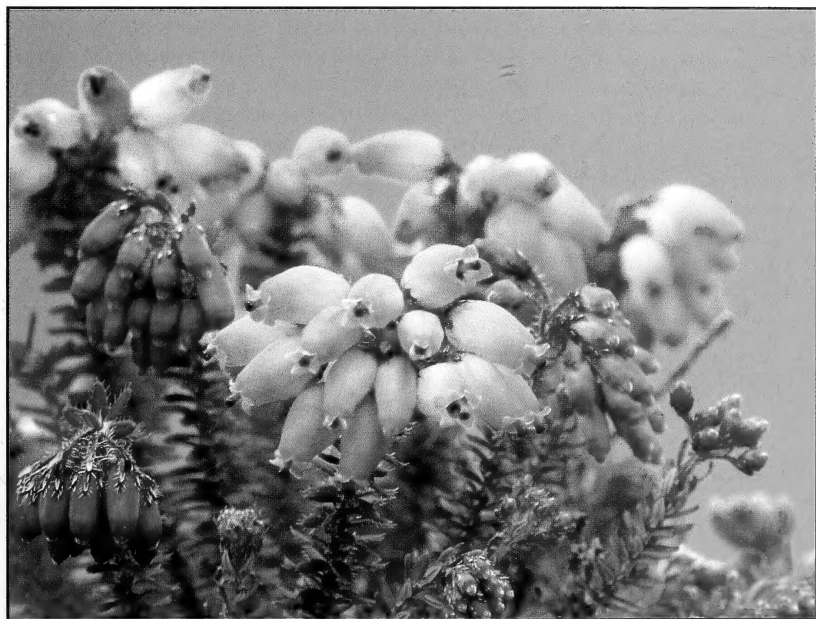


YEARBOOK
of the
HEATHER SOCIETY



1999

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THE HEATHER SOCIETY

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Yearbook of The Heather Society

is accredited with the International Association for Plant Taxonomy
for the purpose of registration of new vascular plant names (excluding fossils).

FRONT COVER:

Close-up of *Erica mackaiana*, near Errisbeg, Co. Galway, Ireland. [A.W. Jones] (see p. iv)

*Yearbook
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The Heather Society*

1999



Editor
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The Heather Society
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Erica spiculifolia, also known as *Bruckenthalia spiculifolia*, in an Irish garden.
(photograph E. C. Nelson).

FAREWELL TO *BRUCKENTHALIA*

The Royal Horticultural Society's Advisory Panel on Nomenclature and Taxonomy has signalled its agreement that *Bruckenthalia spiculifolia* should now be treated as a species of *Erica*. While the Panel's role is explicitly advisory, its decision has one immediate practical effect. The name *Erica spiculifolia* will now be used, instead of *Bruckenthalia spiculifolia*, in *The RHS plant finder* which increasingly is consulted as an authoritative source of plant names.

Plant names are, in the final analysis, a matter of opinion. Some botanists, nurserymen and gardeners will probably wish to continue to regard this species as forming a separate, distinct genus. There is no law compelling the change to be accepted universally. If we wish, we are all still able to use the name *Bruckenthalia spiculifolia* – that name remains valid.

The Heather Society, which has responsibility for registering cultivar names (see pp 68-69), has already accepted that *Bruckenthalia* should be submerged into *Erica*. All the same – and I realise this seems confusing – a register of cultivar names within *Bruckenthalia* is now published.

E. C. NELSON

... of mice and men ...

This is the sixth *Yearbook* that I have had the privilege of editing. Sadly, this *Yearbook* also contains the Society's tribute to my immediate predecessor, Bert Jones. Albert Julian, Vice-President of The Heather Society, pays tribute to Bert in the following pages, as does David McClintock, the Society's President (see p. 54). May I take this occasion also to record my sadness and my thanks to a colleague who, at 64, has passed away long before his time.

Bert edited the *Yearbook* from 1979 to 1993, producing 15 issues; his term as editor lasted longer than that of either of the previous editors, P. S. Patrick (1963–1972) and Arnold Stow (1973–1978). Furthermore, as can be seen from his extensive bibliography (pp 3–5), Bert also contributed in no small measure to the contents of past *Yearbooks*. He was a meticulous editor, and a meticulous scientist, quite content to spend many hours counting and measuring pollen grains to enable him to "sort out" the taxonomy of cultivars. His punctilious work carried over into the enormous task of producing the draft international register of heathers, a task that, most regrettably, Bert was unable to complete due to his debilitating, final illness. Thus his legacy to the Society extends beyond *Yearbook* issues and includes accurate taxonomic data and a prodigious draft register. We will all miss him. Most seriously, we have all been deprived of Bert's substantial, long-accumulated knowledge of heathers. May he rest in peace.

I also wish to take this opportunity to signal several other matters. The Heather Society is an international society and this *Yearbook* is an international journal. This fact is now underlined by the accreditation granted by the International Association for Plant Taxonomy, enabling the automatic registration of new species names published herein.

Like my predecessors, I must try to balance the contents of each *Yearbook*, providing articles and papers of interest to our diverse membership. Some members may not read all the articles, skipping those that seem of no immediate interest. So may I urge you to try to read everything, in each issue. You may miss something of outstanding interest and importance.

This is the last *Yearbook* of the 1900s – the next one will bear the notable date 2000. *Yearbook* 1999 is also remarkable for what it contains. There are articles on flower arranging, Scandinavian folklore, and cultivation techniques, but may I draw particular attention to Ted and Inge Oliver's new Cape species. Often we think we know everything there is to know about heathers, but the Olivers' contribution shows that we still have much to learn. Bees, thrips, wind and birds are all known to act as natural pollinators of heathers – yet, as the Olivers tentatively suggest, the next millennium may even see the addition of a mammal to that list. Mice (and gardeners!) as pollinators of heathers.



Bert Jones in his garden, 11 days before his death. He was an excellent photographer. From his many colour photographs we have selected one, showing *Erica mackaiana*. Bert fell in love with Connemara following The Heather Society's field trip in 1995 and returned two years later in a windy July which made close-up photography in the wild impossible. To photograph the front cover picture, Bert had to pick a few sprigs, position his car in such a way that he could gain some shelter, stick the sprigs in a banana, part of his lunch, and take this picture in the boot of his car.

Albert W. Jones (1934–1998).

Albert William (Bert) Jones, a dedicated, long-serving council member of the Heather Society and our much respected International Registrar, died peacefully at his home in Somerset on Wednesday, 26 August 1998. After many years of constant pain and suffering, and the after-effects of earlier surgical complications, operations for cancer were more than his quite amazingly strong will to live, could overcome. Diane, who gave Bert her whole untiring attention during those painful years, and sons Innes and Ewan have our deepest sympathies.

Bert, together with Diane, first became interested in heathers in 1967, having been inspired by a visit to John Letts' garden, and was soon purchasing plants for his own garden at Taplow from Letts' nursery.

He joined the Heather Society in 1967 and, with Diane, formed the South West Group in 1975. For three years they played a major part in organising its activities. In the following year he was elected to the Council. He then became Editor of the *Yearbook* producing his first issue in 1979, but after 14 years, he was forced to relinquish the post following an operation for a duodenal ulcer. Browsing through the red-backed *Yearbooks*, published during the years of Bert's editorship I was reminded of the wide range of subjects that were covered; articles which so well met the needs and interests of the majority of members and creating a storehouse of comprehensive historical interest for the years to come. This work must have absorbed much of his spare time during a period when his professional scientific responsibilities with Plessey were considerable, involving world-wide travel. It is interesting to note that Diane also edited the Society's *Bulletin* for a period of twelve years. Together, in 1998, they wrote *Conifers and heathers*, one of the popular "Step by Step" garden guide series (although only Diane's name appears as author), and despite Bert's failing health it was produced in an amazingly short time of twelve weeks. It inevitably displayed his profound knowledge of the subject, his meticulous attention to detail, and is mainly illustrated by his own photographs. This was a joint husband and wife effort, and a fine example of the identity of interests and co-operation that existed throughout their married life.

My first contact with Bert was in 1976. I was asked to take over the chair of the Technical Committee and conscious of my limited experience of growing heathers I was a little in awe of my scientist member, Bert; erudite, vigorous in exposition and discussion and with a vast experience of heather culture. In the event, he gave me considerable help and guidance and thus began a friendship which developed through the succeeding years.

In 1970 the Jones' family moved to a charming spot on the banks of the River Cam in West Camel a delightful, Somerset village. The soil was alkaline so the choice of plants that they could grow was limited. With his scientific approach to the prevailing growing conditions he soon became an acknowledged authority on the lime tolerant heather species and their cultivation. Thanks to Bert's generosity my garden, along with many others, has many plants of *Erica carnea*, *E. manipuliflora*, *E. vagans* and others which come from his Otters' Court garden. He also donated many of the plants in the Harlow Carr *E. carnea* and *E. x darleyensis* collections.

Having founded the South West Group in 1975 Bert and Diane moved on to plan the 1979 Conference and played a great part in organising the 1996 Conference. Their delightful garden was featured in the BBC TV series "Gardens for All" in 1985 and more recently *The Daily Mail* gave a coloured full-sheet spread fully illustrating the attractive newly replanted garden.

The Heather Society's President, David McClintock, relinquished the post of International Registrar for heathers which he had held for nearly a quarter of a century and in 1995 Bert agreed to take over despite his continuing health problems. I know that the challenge of taking responsibility for the unfinished Register, assisting in the development of a new computer database and attending to cultivar registration matters was gladly and enthusiastically accepted. Many hours were spent on compiling a revised check list of cultivars comprising three volumes of about 250 pages, and adding this data to the computer database. With unbelievable courage Bert continued to work on his registration duties until the last few weeks. He conducted a registration workshop at the 1996 Conference at Dillington and as guest speaker at the North American Heather Society's 1996 Conference in California his talk was on registration with particular reference to his own work as International Registrar. His lucid and interesting discourse brought very favourable comment and I quote from our chairman's account of the conference: 'He had the unenviable task of explaining how, why and where heathers are registered and named. It is a difficult subject to tackle as there are so few visual aids one can use. Bert did an admirable job and was much complimented on his approach.'

To say that Bert will be sorely missed is a gross understatement and completing the work on the register poses a great problem for the Society. His many friends who have followed his brave fight with the debilitating after-effects of surgery and his later fatal illness will mourn his absence and will be thinking of Diane and family in their great loss.

ALBERT JULIAN

Vice-President of The Heather Society

CULTIVARS ASSOCIATED WITH BERT JONES

- Erica carnea* 'Barry Sellers' – introduced by Otters' Court Heathers by 1988.
Erica carnea 'Spring Cottage Crimson' – introduced by Otters' Court Heathers by 1981.
Erica carnea 'Wentwood Red' – introduced by Otters' Court Heathers by 1981.
Erica erigena 'Brian Proudley' – named by A. W. Jones in 1978.
Erica erigena 'Ewan Jones' – found by A. W. Jones in 1973; introduced, and registered by A. W. Jones, 28 November 1977. Reg. No. 8.
Erica x griffithsii 'Heaven Scent' – registered A. W. Jones, 17 December 1990. Reg. No. 90.
Erica x griffithsii 'Valerie Griffiths' – introduced by Otters' Court Heathers, c. 1990.
Erica manipuliflora 'Cascades' – collected in Dalmatia by A. W. Jones and D. McClintock in October 1988; introduced by Otters' Court Heathers by 1994.
Erica manipuliflora 'Corfu' – registered by A.W. Jones, 27 November 1988. Reg. No. 67.
Erica manipuliflora 'Don Richards' – registered by A.W. Jones, 27 November 1988. Reg. No. 69.
Erica manipuliflora 'Korçula' – introduced by Otters' Court Heathers in 1988.

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Fig. 2.
Lilies and
heathers in a
gilded container

Fig. 1.
Spring Landscape



Points and textures: sources of inspiration for a NAFAS national demonstrator.

MARION SUDBURY

Millcroft House, West Drove North, WALPOLE ST PETER PE14 7HU, Norfolk.

Garden plant material is the favourite medium of any flower arranger, particularly one belonging to the National Association of Flower Arrangement Societies, as gardening and arranging are two parallel passions with members of our organisation.

When I accepted the invitation to write this article I studied my books on plant material and discovered that there were so many species and hybrids of Heathers listed I panicked! What a choice and where to begin; then I decided to use the plants that I am familiar with, those growing in my Fenland garden, without any help from ericaceous composts or acid soil. These rewarding plants offer excellent ground cover, much needed winter colour and wonderful texture and form for flower arranging.

The "Spring Landscape" design (Fig. 1) gives one example of how the versatile *Erica carnea* can be used to contrast with the vibrant colour of *Narcissus* 'February Gold' and the primrose plants. The muted shade of the *E. carnea* gives some depth to the design as well as introducing some much needed rough texture to the grouping. A large plastic plant-pot saucer covered with fresh moss is used as a container for a block of water-retaining foam (Oasis is its trade-name.) The dish is placed on a base covered with a dark green fabric to match the moss and a piece of driftwood is placed in front of the dish. Other seasonal plant materials used are the eye-catching leaves of *Arum italicum* and the long silky catkins of the tassel bush, *Garrya elliptica* 'James Roof'. Narcissi are easier to arrange if used in groups depicting their natural growing habit; if you have difficulty pushing the stems into the foam try inserting a drinking straw into the stem first. The primrose plants have been removed from their pots and have been placed, with the compost, into small plastic bags. The basic components of this arrangement will remain fresh for some time and the narcissi can be replaced when necessary.

The bold beauty of the *Lilium longiflorum* flowers is enhanced by the contrasting form and texture of the white *Erica carnea* which have been arranged in a gilded classical container (Fig. 2). The strong lines of the New Zealand flax (*Phormium tenax*) create the outline and complement the pointed

form of the heather. A further three leaves of the *Phormium* have been curled and anchored into the foam with pins to create a rhythmic line and bring the eye back into the centre of the arrangement. These curls have been repeated with a bolder medium, *Aspidistra* leaves; the smooth surface of these leaves create a calm area in the design as well as contrasting with the rough textures of the heather and carnation blooms. The grouping is simple and combines perfectly with the classical lines of the container. The quantities of plant material used are important and should always be in proportion to the container, which, in this design, stands eighteen inches tall. Five stems of *Lilium longiflorum*, five white carnations, five *Aspidistra* leaves and five *Phormium tenax* leaves were the main components selected together with a large quantity of the white *Erica carnea* used as a filler.

Late Winter and early Spring can often present difficulties for those of us who love arranging garden plant material in the home. The landscape design already discussed is one option. A more sophisticated design is illustrated in the terracotta pot (Fig. 3). The pot I have used is quite large, about ten inches tall and ten inches in diameter. The foam is contained in a plastic-pot saucer placed snugly into the top of the pot. A wide sweeping line is created by placing several large pieces of dried larch branches to one side. These are balanced by a shorter heavier grouping on the opposite side, in this case azalea branches covered with lichen. Visual weight is added to the front with the two string tassels hanging over the edge of the pot, and the bold placement of the fungi. These are balanced by the strong form of the driftwood. The line created by the tassels is continued by the early Spring tulips drawing the eye to the placement of the soft pink flowers of the heather. Further contrasts of form are given by the pine cones, the early flowers of the *Helleborus foetidus* and the bronze tipped leaves of the *Bergenia*. All the groupings of plant material complement one another and harmonise perfectly with the terracotta pot.

Spring demonstrations regularly include my garden heathers, but this need not restrict you to this season. Many of the summer flowering heathers are suitable for use, and of course the tree heath, *Erica arborea*, is perfect for larger designs. Also, many of the lovely South African heaths are readily available in the florist shops, and some of the coarser leaved varieties preserve well in glycerine. The formula is simple, one part glycerine to two parts boiling water, and just recut the stem ends and place in the solution until the leaves begin to change colour. Remove and tie into bunches – just hang the bunch in the airing cupboard until the leaves have changed colour. The preserved material should be stored in well-aired space away from direct sunlight.



Fig. 3.
Tulips and
heathers with
hellebores and
larch.

The exercise was an enjoyable challenge. The illustrations speak for themselves. The pretty pointed forms are visually rough and provide a perfect foil for the dramatic forms of the larger flowers. I now challenge you to have a go – to study the colour, form, texture of your plant material, and the space around it, and combine them altogether to create a design of your own. I wish you happy flower arranging.

CONDITIONING HEATHERS

Rumours abound about the correct way to condition heathers for flower arranging. The simplest way is to cut healthy growth and, using a very sharp knife, remove the outer bark of the last inch of the stem. Place the stems into boiling water for ten seconds then transfer to cool water for several hours. Regular misting with a spray helps to keep them fresh once arranged.



Erica umbellata growing in an old ceramic sink, at Outwell in Norfolk.

***Erica umbellata* in Norfolk**

The plant shown in the photograph had been grown outdoors without protection in Outwell, on the Norfolk/Cambridgeshire border, for the past three years. It has survived temperatures well below 0°C, and does not appear to be affected by the cold, dry winds which are a characteristic of our region. The plant came from northern Spain in 1983; it was collected by David McClintock, David Small and myself on the same trip that yielded *Erica mackaiana* 'Shining Light'.

No special conditions were prepared for the plant. It was, literally, stuffed into a gap among other small plants that were established in an old ceramic sink filled with peat. The sink is occasionally given extra water in Summer when the shamrock pea (*Parochetus communis*) which also inhabits the sink shows signs of wilting. Otherwise it receives only rain.

The colour of the flowers is a strong lilac (I have not compared it with the Society's colour chart yet). The prominent projecting anthers are dark brown. *Erica umbellata* flowers in these conditions in June, the flowers lasting for about four weeks.

E. C. Nelson

Heathers in the glasshouse.

ALLEN HALL

10 Upper Green, Nanpantan, LOUGHBOROUGH LE11 3SG, Leicestershire.

INTRODUCTION

In Victorian times, South African heathers (Cape heaths) were very popular and large, sometimes beautifully ornamental, glasshouses were built to house them. At one time the Veitch Nursery in Chelsea was offering 150 species. The popularity of South African heathers declined as the large estates faced rising costs. The maintenance and running costs of enormous glasshouses were very high and proved to be a luxury that could be dispensed with. In recent times, perhaps the best collection of Cape heaths in Britain was at the Royal Botanic Gardens, Kew. This well-kept collection of about 50 species, mainly winter-flowering ones, was in the Temperate House. Kew, like the Victorians, considered that there was plenty of colour outside in the garden in the summer and the best use for Cape heathers was to provide blossom in the winter. Now, not more than about 40 species of South African heathers are commercially available in Britain. Cape heaths retain a hold on the pot-plant market and millions of *Erica gracilis* and *E. x hiemalis* plants are sold from market stalls each autumn.

There is a persistent view that glasshouse gardening is not for the heather enthusiast – that it is, if anything, a rich man's pastime. The palaces of glass loved by rich Victorians were expensive to build, maintain and heat, but modern glasshouses are cheap both to buy and heat. They are no longer the preserve of the rich, and many thousands of gardeners today routinely use small greenhouses, and thousands more householders have conservatories. Many "townies" with little or no garden are glasshouse gardeners and I have seen glasshouses built on the flat roofs of apartment blocks in central London. It is arguable that elderly or infirm people can find enjoyment in glasshouse gardening when gardening outdoors is beyond them. And any gardener will find it more attractive to potter in a glasshouse on a cold winter's day than to work outside.

Heathers in the popular imagination mean the hardy heathers of northern Europe. There are, however, a number of European species of great

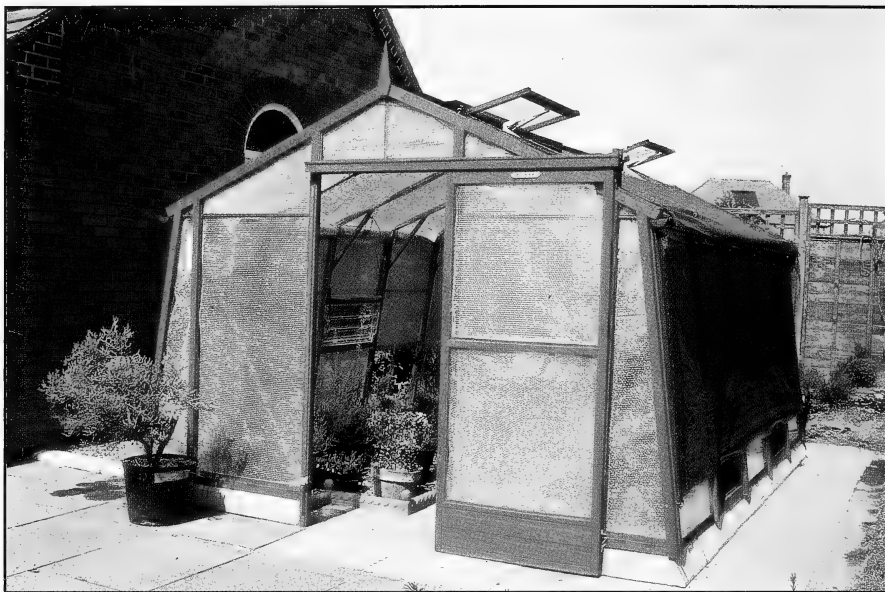


Fig. 1. Allen Hall's glasshouse with *Erica canaliculata* (outside). This is an Alton wooden greenhouse set on purpose-made concrete foundations. Note the automatically operated roof and side vents, and manually worked floor-level vents, bubble insulation and green shading.

beauty which are not reliably hardy everywhere in northern Europe, including Britain and Ireland, but are well worth growing.

Enthusiasts in other specialist societies do not shrink from giving their favourites some winter protection and it is common for vegetable gardeners to use greenhouses to give their plants an earlier start in the season. I am astonished that more heather enthusiasts do not use glasshouses to enable them to grow a wider range of heathers including those from Mediterranean climes. Then there is the vast potential of more than 700 South African species of *Erica* to invite a new look at growing heathers in glasshouses.

THE GLASSHOUSE: I. COST

Small aluminium-framed glasshouses can be purchased for as little as £150. The most common size of domestic glasshouses is 8 feet wide by 10 feet long (2.4x3m) and a good quality one with a few extras, like staging and guttering, can cost around £1,000. Shopping around is essential because prices for apparently similar structures differ widely from one outlet to another. Plenty

of advertisements can be found in horticultural and gardening magazines, including *The garden*, and it is best to look at models on display before buying, if possible. The cost of erecting the glasshouse must be taken into consideration. The choice between wooden and aluminium frames comes down to personal preference – there are no compelling advantages one way or the other. Wood is a better insulator than aluminium and it is easier to fix shelves, tack in insulation, etc., on wood than aluminium, though attachment fittings are available for aluminium frames. But wood needs to be treated every two or three years to prevent it rotting.

THE GLASSHOUSE: II. PREPARING THE SITE

The site for a glasshouse needs to be prepared in advance. It must be level and some form of foundation will be needed. The glasshouse should be orientated west–east if possible but the nature of the site will probably dictate the orientation. A path, usually of concrete slabs or concrete cast *in situ*, is needed down the centre of the glasshouse.

Amateurs normally grow their glasshouse heathers in pots and to accommodate this, the beds should be dug only about 3 inches (7cm) deep. It is wise to do this on both sides even if staging is erected along one side. The exposed surface should be covered with black polythene sheets (empty plastic peat bags will do) and a garden fork driven through here and there to create drainage holes. A layer of pea shingle can be spread on top of the plastic; for a standard 8x10ft glasshouse about half a ton (0.4m³) of shingle will be needed to cover the two beds. The beds are now ready for plant-pots.

THE GLASSHOUSE: III. FEATURES REQUIRED FOR GROWING HEATHERS

Heathers, including South African ones, like plenty of air. In fact this holds true for most plants. Good ventilation with numerous vents is therefore essential. In winter good air circulation helps prevent grey mould (*Botrytis*). A guide, sometimes quoted, is that the available ventilation area (including the door) should be about one third of the floor area. Some glasshouse users who have electricity installed also have thermostatically controlled fans, or fan heaters set to the “sunshine” position, to assist ventilation.

Except in mid-winter when the sun is low in the sky, the temperature reached inside a glasshouse, even with good ventilation, can be over 100°F (40°C). To control temperature, shading needs to be installed on the outside of the glass, on the sunny sides. Dark coloured netting or gauze designed for the purpose will do. With wooden greenhouses, the netting is stretched between appropriately placed cup-hooks screwed into the frame of the roof



Figs 2 & 3. Inside the glasshouse, showing staging with *E. bocquetii* in bloom, and *E. maderensis* on the high level stage.



The gravel bed, with *E. bocquetii* in full bloom. In summer most plants are outdoors. (Both photographs July 1998).

and sides. Fixing attachments are available for aluminium ones. Some of the netting may be retained in position during the winter.

The main object of growing heathers in a glasshouse is to protect them from frost. Hardy heathers in pots will survive outside without protection but will do even better in an un-heated glasshouse even though the pots may freeze solid in cold weather. But Cape heaths and the non-hardy heathers of southern Europe need to be kept frost-free and it is simply no use going to the expense of erecting a glasshouse for tender heathers unless it is reliably heated in winter. Some Cape heaths can withstand freezing temperatures in their native habitats but it is established that they rarely will in Britain.

In general, therefore, heating is a basic requirement. The minimum winter temperature needs only to be maintained a little above freezing, 40°F (5°C). There are, of course, various forms of heaters. I prefer an electric fan heater because it keeps air circulating which is good for the plants and ensures reasonably even and quick distribution of warm air. I calculate that it costs

about £50 per year to heat my 10x13ft glasshouse, which is insulated with bubble-plastic. Paraffin or butane fuelled heaters can be used. It must be remembered that these produce a fair amount of condensation so it is even more important to ensure that the glasshouse gets a good blow through after the heater has been in use as soon as the ambient temperature permits. A maximum/minimum thermometer will be needed so that temperatures can be monitored and the level of heating adjusted.

It is not essential to insulate the glasshouse but it makes obvious financial sense to do so, to cut down fuel bills especially when electricity is used. Bubble-plastic insulation is available in garden centres and DIY stores. It slowly degenerates and needs to be replaced after about three years.

An essential for those living in hard water areas is a water butt because 'soft water' (lime-free water) is essential for lime-hating plants. Guttering attached to the glasshouse eaves usually provides an adequate supply of lime-free rain water. Heathers will tolerate 'hard water' for a few weeks or even months but continuous use of 'hard water' will eventually cause chlorosis and death (see below).

Irrigation equipment is not essential but at times can be useful. While neighbours and family can be kind and agree to water your plants when you are away on holiday, they are unlikely to have the knowledge and experience necessary to ensure that this is done properly. However the grower's experience can be built into a purpose-designed irrigation system which can be called into use generally for spells in the summer. A mains water supply is piped into the glasshouse by garden hose, and it can save work later on if provision is made for a hose pipe when the glasshouse foundations are laid. The hose is fed through a battery powered water controller which incorporates a clock and valve. These controllers are not cheap. Individual drip water feeders for each pot or container come into their own for this application. To get the right amount of water, little valves are inserted in the micro-pipe system just by the water feeder. For large containers, two or three drippers may be necessary. Sprays can be used provided effective precautions are taken to prevent electrical equipment being splashed.

I like to put my plants outside for the summer months where a spray type system can be used, again using the water controller to turn the water on and off at predetermined times. My experience is that two five-minute periods a day suffice, one before the sun gets on the plants and another in the evening. But experience and observation of the individual installation will soon show what is necessary. If the mains water is hard, it is best to limit the use of irrigation to a few weeks per year in total.

THE GLASSHOUSE: IV. HYGIENE

It is important to maintain a good standard of hygiene in the glasshouse. This is made easier if the plants are in pots or containers which can be removed. All heathers including Cape heaths, benefit from summer in the open air and this also gives the glasshouse an airing. I make use of the summer to remove fallen leaves and debris from the pea gravel and then rake the gravel. The staging and shelves are washed with a solution of Jeyes Fluid. I also flush the gravel with the same disinfectant using a watering can with a rose. When the bubble insulation is replaced, opportunity is taken to wash the glass and treat the wooden frame with a suitable preservative inside and out.

No plant can safely be put back into the glasshouse for a month after these ministrations to allow the gravel to dry and the fumes disperse.

The external glass and guttering are swilled down every year and the rain water butts are cleaned out thoroughly every time they run empty. A pinch of potassium permanganate is added to each butt when it is full of fresh water to keep it clear of algae. In the summer, vents and the door of the glasshouse are left open even when there are no plants in it, but pieces of the cheapest plastic netting available can be hooked over the lower apertures to prevent foxes, dogs, cats or other creatures getting in and fouling the inside. Incidentally, the netting also prevents birds flying in; sparrows, in particular, can get confused and frightened if they fly in and cannot see a way out. The bubble insulation also helps; birds can see it whereas they frequently fly against clear glass and harm themselves.

During the growing season, the glasshouse is swept out frequently and dead foliage is removed at first sighting.

HEATHERS FOR THE GLASSHOUSE: I. EUROPEAN HEATHERS

For the amateur gardener, gardening has to be fun or it is nothing and so it is not possible or desirable to lay down rigid guide-lines for other gardeners to follow. The comments which follow are a reflection of my own interests – you may find some information or ideas of use.

For me, a glasshouse is, first of all, a tool to make my hobby – heather growing – more successful and more pleasurable. I use it to protect tender seedlings and rooted cuttings, and, if there is room, to protect hardy heathers potted last season to grow on ready for planting in the spring.

My interest in heathers extends to all the European species, some of which are not hardy or are of doubtful hardiness in the part of England where I live. I use my glasshouse to protect the tender ones during the winter,

and specimens of the doubtful ones, in case those I have planted outside perish.

Heathers that pass the test of hardiness differ in each country, and in each microclimate within those countries. So there is a sliding scale of hardiness relating to the southern European species which depends on locality and indeed on the microclimate of individual gardens. Experience is everything. Most of my experience was gained at our former home in Surrey where our sheltered garden was a bit of a frost pocket. I am experimenting anew in Loughborough.

With these reservations in mind, the species, which I consider must be given winter protection are *Daboecia azorica* and *Erica andevalensis*, *E. sicula*, *E. bocquetii*, *E. maderensis* and *E. multiflora*. Thus, for example, I grow *E. maderensis* under glass in winter even though plants growing wild in the mountains of Madeira are sometimes covered in snow. *Erica maderensis* did not survive frosts in my garden in Surrey. Further north in England, this list can probably be extended to include *E. lusitanica*, *E. australis*, *E. arborea* and *E. umbellata*.

Additionally, there are cultivars within nominally hardy species which need winter protection. For example, I have several plants of *Erica ciliaris* 'Fada des Serras', introduced by John Tucker and named by him after the place in Portugal where he discovered it. This heather is hardy in John's lovely garden in Worthing where it is 2ft (0.6m) tall. It did not prove hardy for me in Surrey, 70 miles (85km) to the north. It now finds a place in my glasshouse while others are on trial in sheltered spots in my new garden even further north in Loughborough.

Among the European heathers which I consider to be of doubtful hardiness in Loughborough and, therefore, in need of some winter protection is *E. lusitanica*, particularly the cultivar 'George Hunt'. I would not be without *E. lusitanica* (my American west-coast friends will smile at this because, for them, it is a persistent weed), and if my caution proves unnecessary, what have I lost? And anyway, it makes a marvellous pot plant. I have doubts about the hardiness of the several subspecies of *E. scoparia*, subsp. *azorica* (from the Azores), subsp. *platycodon* (from the Canary Islands) and subsp. *madericola* (from Madeira) Specimens enjoy the protection of my glasshouse while their siblings face the winter blast outside. I am sure that *E. scoparia* subsp. *scoparia* will survive outside; but in England it makes a straggly, unattractive plant, quite unlike the fine bush it forms in warmer climes. Moreover, it does not seed prolifically in England. Can it then be regarded as truly hardy?

I ensure the survival of my stock of *E. x veitchii* 'Pink Joy' and 'Exeter' by keeping specimens in the glasshouse.

Some of the European species are easier to raise from seed than by cuttings; *E. maderensis*, *E. umbellata* and *E. lusitanica* are examples. The glasshouse is an important aid in nursing the seedlings.

Incidentally, years ago, when I first acquired *E. umbellata* (see pp. 10 and 30), I followed my cautious practice of over-wintering specimens in the glasshouse. I found that the species was perfectly hardy in Surrey but the plants did need a well-drained soil. My pink and white varieties gave splendid displays of colour in April and May, and plenty of seeds later on. The seedlings have so far all borne pink flowers.

A few European species of heather are difficult to obtain in this country. The best means of obtaining plants of the less usual ones is from fellow-members of the Heather Society. Plants are commonly exchanged or given away at meetings of local groups.

HEATHERS FOR THE GLASSHOUSE: II. SOUTH AFRICAN HEATHERS

During a recent visit to Ireland, members of the Society saw certain South African heathers growing in a garden just outside Dublin and plants of the same species also survive in favoured and sheltered spots around the south and west coasts of Britain (see *Yearbook* 1995). Most gardeners in Britain can only enjoy these plants if they have a glasshouse.

As I write, in February, my glasshouse is both colourful and fragrant with the flowers of *E. mollis*, *E. subdivaricata*, *E. canaliculata* and the hybrid *E. baccans* x *arborea*. The flowers of *E. versicolor* are just coming out. Since there are at least 700 species to choose from, it is barely possible to do more than describe one or two here.

Erica canaliculata (see *Yearbook* 1995, p. 20) is a tall growing shrub with pale pink flowers. It holds its blossom for about four months from late December onwards. It is perhaps the hardiest of the Cape heaths and has been grown outside in well-protected spots in the south and west and inner London. I have tried several times to grow it outside, all without success. In the wild, it grows to a height of 5 metres but it responds well to pruning and it is easy to propagate from cuttings. *E. pageana* (see *Yearbook* 1995, cover & p. 22) has lovely buttercup yellow flowers and a deep glossy foliage. It is also regarded as being at the hardier end of the range and flowers in England from January to April. It will make a bush of about 60cm and in its native clime grows in marshy areas 1,000m above sea level. *E. baccans* has pink bells (Fig. 4) and makes a very attractive glasshouse or conservatory plant.

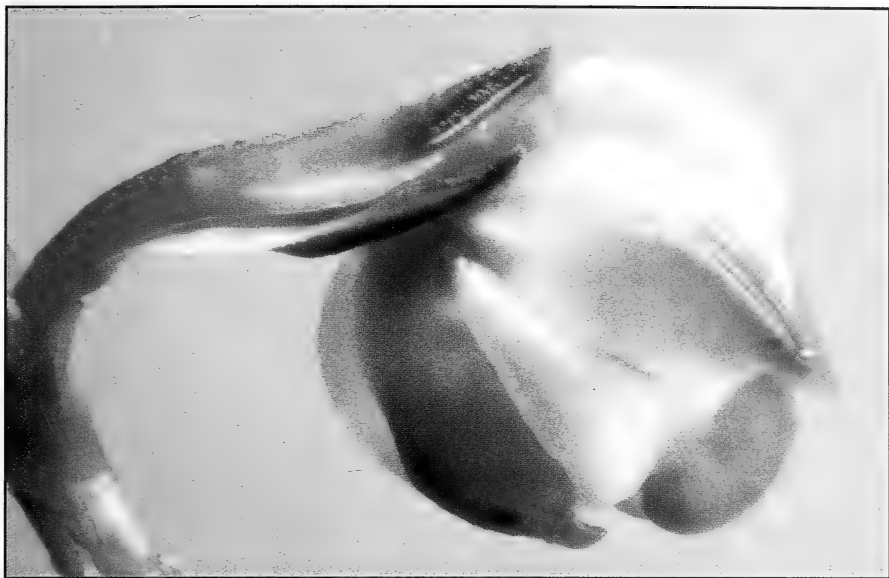


Fig. 4. *Erica baccans*: a single flower greatly enlarged.

It flowers in the spring in England. In its native clime, it can reach a height of 2.5m and appears to prefer a well-drained soil.

Cape heaths can grow tall but they respond well to pruning to keep them shapely and prevent them from out-growing the glasshouse. It is as well to keep taking cuttings from the rarer European heathers and the Cape heaths. This is easier said than done for many species, but propagation forms no part of this paper.

CULTIVATION: I. COMPOST & POTS

Heathers grown in pots generally need an open, acid compost, and I prefer a 1:1 mixture of moss peat and medium grade Perlite™. The heathers are better grown in a lean compost, since if they grow slowly they will be hardier and more resistant to disease. However, the compost described is devoid of practically all nutrients and some fertiliser should be added: John Innes base fertiliser at the rate of 1 fluid oz (28.4ml) per gallon (4.55 litres), or a similar amount of Vitax Q4 which contains some trace elements.

Some heathers do better in a less acid and more sharply draining compost. These include *E. bocquetii*, *E. umbellata*, *E. multiflora* and (I suspect)

E. maderensis. A suitable compost for these is composed of equal amounts of moss peat, medium grade Perlite and low pH gravel, with the fertiliser as before. *E. bocquetii* grows in crevices in limestone cliffs and probably needs an alkaline soil but I have been unable to experiment with this species and so am reluctant to comment.

Plastic pots are now commonly used though terracotta ones are better. Pale, terracotta-coloured plastic pots are marginally better than black ones because they do not absorb as much heat from the sun. Pots should always be thoroughly cleaned after each usage. Immature heathers will normally need re-potting each year, but judgement needs to be exercised.

CULTIVATION: II. WATERING

Heathers, particularly *Erica*, are unforgiving if given too much or too little water and the first sign of trouble is usually the last – the plant dies. Knowing the needs and characteristics of the various species is part of the skill of the heather grower and this knowledge comes from experience. Normally, heathers should be watered by hand each according to its own characteristic need using ‘soft water’. Some heathers, for example the Cape species *E. curviflora*, need a lot of water. In its natural habitats, *E. curviflora* grows in and around the edges of streams. Some heathers do not like to be waterlogged and it is easy to kill these species by over-watering them. In summer the plants will need watering (but not waterlogging) every day, whether in the glasshouse or out of doors for their annual holiday. On bright or hot days when the heathers are in the glasshouse, plenty of water needs to be sprinkled on the floor and foliage to help keep the temperature down and the humidity high. In the depths of winter, the heathers should be checked every week but may not need watering more than once in every two or even three weeks. Vigorously growing plants obviously will need more water than ones making little growth. A good method of testing a pot is to weigh it in one’s hand – if it feels light it probably needs some water. Running a finger lightly in the top of the compost will also give some indication of its relative wetness.

Whether the heathers are watered by hand or automatically, if the water contains lime, it will slowly, over a period of weeks cause chlorosis and the leaves of the plants will go yellow. This condition can be cured or anticipated by watering the plants with a solution of chelated iron from time to time. A tablespoon (= .5oz, 14.2ml) of chelated iron to 1 gallon (4.55 litres) of water is about right. Soak the compost in the pots with this solution about once every six weeks, if use of hard water is unavoidable, or more frequently if symptoms of chlorosis appear.

CULTIVATION: III. VENTILATION & CONTROL OF DISEASES & PESTS

Heathers growing closely together in a glasshouse are more prone to insect damage or disease than ones growing outdoors. Good ventilation will help sweep away airborne pests and pestilence, help keep the glasshouse cool in summer and lower the humidity in winter. The glasshouse vents should be opened every day when the ambient temperature is above freezing. Glasshouse gardeners make a ritual of listening to the weather forecast every day.

Professional growers make routine use of fungicides for plants in tunnels or under glass, spraying, or drenching every ten days. This is not normally necessary for amateurs. Never the less, I spray my plants with a systemic fungicide when they go into the glasshouse at the end of the summer and again, using a different fungicide, at Christmas. Some strains of fungi have become resistant to certain fungicides, so it pays to ring the changes. I also spray the plants with systemic insecticide shortly after they go into the glasshouse, and again if there are signs of trouble.

CONCLUSION

The main costs involved in growing heathers under glass are associated with the purchase of the glasshouse itself, the preparation of the site and the erection of the house. Everything else, including the plants, can be added progressively and the costs spread. Indeed it is better to start slowly and build up. The pleasures of glasshouse gardening also build up as the gardener adds plants to his collection and gains experience.

A TABLE OF HYBRID HEATHERS INVOLVING EUROPEAN SPECIES

<i>arborea</i>				4			6					
<i>baccans</i>												
<i>bergiana</i>												
<i>carnea</i>	4					1			3			
<i>ciliaris</i>										7		
<i>erigena</i>				1								
<i>lusitanica</i>	6											
<i>mackaiana</i>										5		
<i>manipuliflora</i>												2
<i>spiculifolia</i>				3								
<i>tetralix</i>					7		5					8
<i>vagans</i>								2		8		
	<i>arborea</i>	<i>baccans</i>	<i>bergiana</i>	<i>carnea</i>	<i>ciliaris</i>	<i>erigena</i>	<i>lusitanica</i>	<i>mackaiana</i>	<i>manipuliflora</i>	<i>spiculifolia</i>	<i>tetralix</i>	<i>vagans</i>

Key to binomials

- | | |
|------------------------------|--|
| 1 <i>E. x darleyensis</i> | 5 <i>E. x stuartii</i> (formerly <i>E. x praegeeri</i>) |
| 2 <i>E. x griffithsii</i> | 6 <i>E. x veitchii</i> |
| 3 <i>E. x krameri</i> | 7 <i>E. x watsonii</i> |
| 4 <i>E. x oldenburgensis</i> | 8 <i>E. x williamsii</i> |

Binomials have not yet been provided for

E. arborea x baccans

E. tetralix x manipuliflora

E. bergiana x spiculifolia

Propagation of heathers from seed.

BARRY SELLERS

8 Croft Road, NORBURY, London SW16 3NF.

The genus *Erica* is distributed from Norway to South Africa and comprises around 750 species. Hybrids are also known – some occur naturally, but most are the result of artificial inducement. Hybrids involving European species are tabulated opposite; only *E. x stuartii*, *E. x watsonii* and *E. x williamsii* occur in the wild, and the others have been induced by hand-pollination.

Much of the hybridisation work was carried out in Europe in the nineteenth and twentieth centuries. More recently at the National Botanical Institute, Kirstenbosch, South Africa, workers have succeeded in crossing several Cape heaths, including *E. nana* and *E. patersonia* 'Gengold', while Kurt Kramer in Germany has successfully hybridised European and southern African species.

REPRODUCTION

In their natural habitats, species of *Erica* are pollinated by a variety of different methods, by wind, insects and birds. Once pollinated the ovary swells until it is ripe, and turns brown. When ripe the seed capsule will open (dehisce) releasing the seed. Until recently the seeds of *Erica* species have received little attention from researchers, yet the seeds of different species vary considerably in size, colour and shape. *E. carnea* and *E. erigena* have large seeds compared to those of *E. lusitanica* and *E. cinerea*. The hard outer coating of different species gives rise to a range of surface sculpturing (Oliver 1991). Some seeds are slightly winged, no doubt to assist distribution in their natural habitats.

The ability to reproduce by seed ensures the continued existence of each species. Fire plays an important part in the ecology of many African species, and the seeds of a vast majority of species germinate only after a fire. However, fire and its aftermath are not the only cues to germination. Warm and cold stratification, a fluctuating temperature regime, and moisture, have important roles to play.

Plants propagated from seed, whether from a species or a cultivar, will not normally reproduce exactly the characteristics of the parent plant. Thus propagation from seed can give rise to many interesting new forms. Seeds collected from plants growing in a garden will be more likely to give rise to different forms than seeds collected from wild populations.

EUROPEAN HEATHERS

COLLECTING SEED

Seed may be obtained from all European species and many of their cultivars. The best time to collect seed is a few weeks after flowering. When ripe, on a dry day, capsules can suddenly dehisce releasing all their seed. Always remember that when collecting seeds they should be put in a dry container or envelope and labelled. A calendar for seed collection is given in Table 1.

Hybrids of European heathers (e.g. *E. x darleyensis*) are normally sterile and therefore do not produce seed unless they are tetraploids.

If you intend to attempt to produce particular progeny then the parent plant must be protected from pollination by insects, and must be hand-pollinated using pollen from another plant that also has not been visited by insects. Where pollen is taken from one species or cultivar and placed on the stigma of another there is potential for hybridisation.

SOWING SEED

The best time to sow seeds is in Spring or Autumn.

Take a wooden or plastic seed tray 3–4in (75–100mm) deep, and place a .25in (5mm) layer of fine gravel in the bottom, and then a layer of washed potting grit .25–.5in (5–10mm) deep. Mix a proprietary ericaceous compost with Cornish grit (or fine granule Perlite) and/or fine washed potting grit, and silver sand in a ratio of 3:1:1:1 and fill remainder of seed tray. Soak seed tray in rainwater until the surface has become damp.

Mix the seed with dry silver sand and sow evenly over the surface, and then sieve a thin layer (not more than cin (2–3mm) deep) of dry washed grit and/or silver sand over the surface; this will help to retain moisture and inhibit the growth of moss, as well as protect and cover the seeds. Label the seed tray, and place it on a bed of fine gravel within a larger tray which has been watered – this will allow a more even take-up of water by capillary action. Do not allow seed compost to dry out at any time, and do not keep the tray sitting in deep water. Mist-spray the surface of the compost, by hand, at least twice a day, and continue even after seeds have germinated; misting helps to keep the soil surface moist and cools the seedlings. Keep

		J	F	M	A	M	J	J	A	S	O	N	D
1.	<i>E. arborea</i>		✕	✕	✕	✕	●	●	●				
2.	<i>E. australis</i>			✕	✕	✕		●	●	●			
3.	<i>E. bocquetti</i>				✕	✕		●	●				
4.	<i>E. carnea</i>	✕	✕	✕	✕	●	●				✕	✕	✕
5.	<i>E. ciliaris</i>	●	●				✕	✕	✕	✕	✕		●
6.	<i>E. cinerea</i>						✕	✕	✕	✕		●	●
7.	<i>E. erigena</i>	✕	✕	✕	✕	✕	●	●					
8.	<i>E. lusitanica</i>	✕	✕	✕	✕	✕	●	●	●				
9.	<i>E. mackaiana</i>						✕	✕	✕	✕		●	●
10.	<i>E. maderensis</i>					✕	✕	✕		●	●		
11.	<i>E. manipuliflora</i>	●						✕	✕	✕	✕	●	●
12.	<i>E. multiflora</i>	●	●	●	●					✕	✕	✕	✕
13.	<i>E. scoparia</i>					✕	✕		●	●			
14.	<i>E. sicula</i>			✕	✕	✕		●	●				
15.	<i>E. spiculifolia</i>						✕	✕		●	●		
16.	<i>E. terminalis</i>	●	●				✕	✕	✕	✕	✕	●	●
17.	<i>E. tetralix</i>						✕	✕	✕	✕		●	●
18.	<i>E. umbellata</i>				✕	✕	✕		●	●			
19.	<i>E. vagans</i>	●	●					✕	✕	✕	✕		●

✕ = Flowering period

● = Seed collecting period

Table 1. Months when seed can be collected from heathers

the seed tray in a shaded part of a well-ventilated greenhouse, out of intense direct sun, to prevent rapid evaporation from the soil surface and, when seedlings appear, prevent them drying out.

After one to three months seed should have germinated. At first the seedlings have two green leaf-like cotyledons; then the true leaves appear. To prevent seedlings becoming too leggy, pinch out the tip if they are over 1in (25mm) high. This will make them sprout side shoots and stimulate growth.

TRANSPLANTING

Seedlings are ready for transplanting six months to one year after germination. Use a stainless steel household fork and/or skewer, or proprietary small gardening tool to prise seedlings from tray, taking great care to avoid damaging the roots which are normally much longer than the stem and will probably have reached the base of the seed tray. If you need to hold a seedling, hold it by the leaves at the very tip of the shoot.

Mix ericaceous compost with Cornish grit (or fine granule Perlite) and silver sand in a ratio of 3:1:1, adding a little fertilizer (it is best to use granules, and follow the instructions of the manufacturer). Use this to fill small 3in (75mm) pots or compartmented seed trays. Soak the filled pots or trays in rainwater until surface is moist. Use a dibber or a finger to make a deep hole in the compost, insert one seedling, and firm the compost lightly around it. Spray with water and place the pots or trays in a larger tray filled with fine gravel, and keep watered. Do not allow the soil in the pots or trays to dry out, nor to sit in deep water.

SOUTH AFRICAN HEATHERS

South African heathers – Cape heaths – have been grown in Europe for about two hundred years. Interest has now extended to the USA, Australia, New Zealand and Japan. In parts of Australia and New Zealand, some Cape species (e.g. *E. baccans*) have become naturalised.

These heaths display fascinating and substantial variation in the shape, colour and size of their flowers and leaves, so potential choice is considerable. They also represent a challenge in cooler climates due to their susceptibility to frost, although many will withstand temperatures as low as -5°C without damage.

The best way of raising South African heathers is from seed, primarily because it is readily available. Methods of propagation are discussed below.

OBTAINING & COLLECTING SEED

Use seed from reliable sources (see Appendix), or collect it from your own plants in the same way as for European heathers. Note that the capsules of some species such as *E. pageana* dehisce soon after pollination, whereas those of *E. sessiliflora* take much longer to mature. Some seed capsules, such as those of *E. hebecalyx*, are very sticky and this can make seed collecting difficult.

GERMINATING CAPE HEATH SEEDS

Extensive research has been undertaken by the Conservation Biology Unit at the National Botanical Institute in South Africa into the germination of Cape heaths. Most South African heathers inhabit the fynbos, a characteristic of which is recurring fires. Thus fynbos plants, including heathers, are adapted so that their seed germinates in response to one or more cues provided by fire. Professor Neville Brown (1993, 1994) has been foremost in the research to discover which aspects of fire stimulate seeds to germinate. It was found that smoke itself is the main cue responsible for stimulating the germination of seed of many heathers (Brown *et alii* 1993, 1995). This research is of immense importance for the conservation of the South African *Erica* species.

In addition to smoke inducement, warm and cold stratification (i.e. the exposure of seeds to alternate periods of relatively high and low temperatures) may be a pre-requisite to germination in some Cape heaths. Certainly a fluctuating temperature regime appears to be important; constant high temperature is not a pre-requisite for germination, and experience has shown that germination can occur at quite low temperatures. Seeds of *E. glauca* germinated in December in an unheated greenhouse in Britain, six months after being treated with smoke solution. Other factors postulated as cues for germination include dry-heat fracturing the hard outer coating of the seed, stimulation by ethylene and ammonia (constituents of smoke), and the gibberellins produced by naturally-occurring fungi. Experiments by J. G. C. Small and his colleagues demonstrated that a good germination of *E. junonia* was obtained at a moderately low temperature (10–12°C) in the presence of gibberellic acid, but higher temperatures impaired germination (Small *et alii* 1982).

Researchers at Kirstenbosch have developed and patented 'instant dehydrated smoke' as an alternative to producing smoke by burning fynbos or ericaceous plant material – see Deon Kotze's article in the *Yearbook of The Heather Society* 1996.

Seeds of Cape heaths will normally begin to germinate in about 8 weeks, although some species may take up to one year. Some are extremely difficult to germinate at all because multiple cues are required to break their dormancy, so some species are more easy to germinate than others. The following species are suggested for beginners: *E. baccans*, *E. caffra*, *E. fontana*, *E. oatesii*, *E. patersonia* and *E. walkeria*.

Of the two methods of germinating seed using smoke-inducement, one, 'live' smoke-inducement', is explained below; 'instant dehydrated' smoke-inducement was explained by Kotze (1996).

'LIVE' SMOKE-INDUCEMENT

Prepare seed compost using peat, Cornish grit and/or washed potting grit and silver sand in the ratio of 3:1:1:1, although a higher proportion of sand may be desired. Fill a 3in or 4in (75 or 100mm) seed tray with .25 -.5in (5-10mm) of washed potting grit and the remainder with compost. Mix the seed with dry silver sand and sow evenly on the surface, lightly cover and label the tray; a hand-written plastic label will suffice. Place the seed tray in an enclosed box or polythene tent (see Fig. 1); several seed trays may be prepared at the same time and stacked inside the box. Prepare a fire using mainly fynbos or ericaceous plant material, and pass the smoke from fire through a pipe into the box or polythene tent for 30 minutes and then leave for about 2–3 hours. Remove the tray from the box or polythene tunnel and soak in rainwater until the surface is moist. Sieve dry silver sand or fine grit over surface (0.1in (1–2mm) deep) to help deter moss, and retain moisture. Place the seed tray in one filled with fine gravel and store in well-ventilated greenhouse, protected from direct sun. Spray surface of compost at least twice daily. In the winter months considerably less watering is required, and try to maintain temperatures above 0°C.

Fungi can be harmful to young seedlings; it may be necessary to use a weak solution of fungicide (e.g. Diathane M45) to prevent damping off. When the seedlings are about 1in (25mm) tall consider transplanting them into 3in (75mm) pots. The roots of Cape heaths tend to be even more susceptible to damage than their European counterparts, so take extreme care in easing seedlings out of the seed trays – use a household fork. Often the depth of the roots will be three times the height of the seedling. Ensure that the compost is moist before transplanting, and keep moist. It is possible to add fertilizer granules to the compost when mixing it, or, alternatively, feed with a proprietary Ericaceous fertilizer according to the manufacturers instructions.

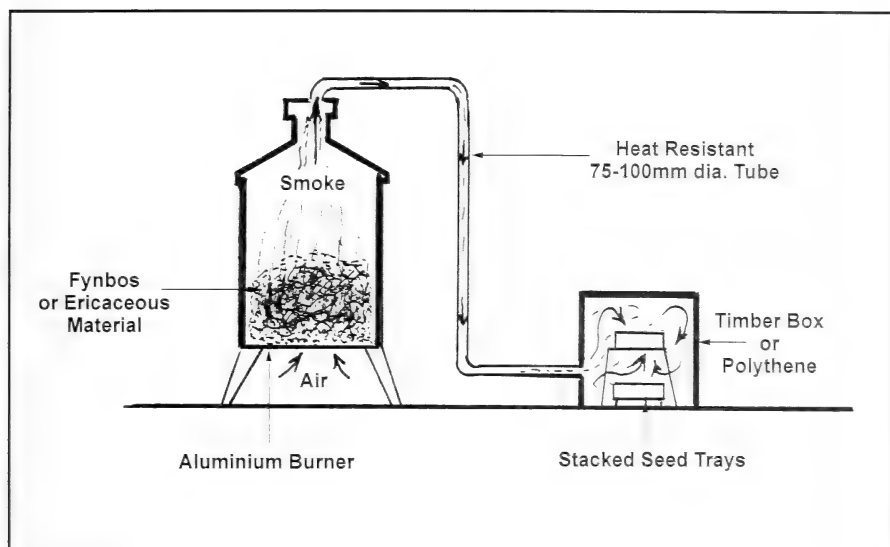


Fig. 1. Possible arrangement for smoking seed.

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APPENDIX

Seed of Cape heaths can be obtained from the Botanical Society of South Africa. The Society distributes seeds of many indigenous species to members only, once a year. For details of membership please contact: Membership Secretary, Botanical Society of South Africa, Private Bag X7, Kirstenbosch, Claremont 7735, Republic of South Africa. tel. (+27) 21 7972090.

Erica umbellata in central Ireland.

KEITH LAMB

Woodfield, CLARA, County Offaly, Ireland.

We garden on a limestone soil in one of the colder parts of Ireland, and so are limited in the number of heathers we can grow. Therefore we were pleased to acquire an additional kind that would live in our garden.

For 12 years now we have cultivated a lime tolerant species that does not seem to be widely grown. This is *Erica umbellata*, a native of Portugal and the north of Spain. In that time it has formed a rounded bush some 20 inches high (50cm), with tiny imbricate leaves. As the name indicates, the flowers are borne in umbels of up to 8 flowers. In our plant these flowers are nearer to the rosy pink colour described in Bean (1973) than to the rosy purple mentioned by Polunin & Smythies (1973). Colour variations could be found in the wild. We have heard of white-flowered forms, and though we did not find such a plant we did note a distinctly pale specimen in northern Portugal. Bean refers to the growth habit as varying to semi-prostrate, so there would seem to be scope to select for plant shape as well as flower colour.

Woodfield is in the centre of Ireland, a cold area compared to the coastal districts noted for gardens containing frost-sensitive plants. Winter temperatures here go to -5°C , and annual rainfall is c. 40 inches (c. 1000mm). Last Spring (1998) late frosts badly damaged plants never seen injured before (e.g. *Bergenia*). Though *E. umbellata* is said to be tender it was uninjured.

An added attraction of *E. umbellata* is that it blooms in May and June, when flowers are scarce in the heather garden. Perhaps the abundance of other flowers at that time has led to this heather being overlooked by the general gardener. *The RHS plant finder* lists half a dozen nurseries that supply this species, all but one entered as being heather specialists.

It is interesting to speculate whether a race of lime tolerant heathers could be raised utilising *E. umbellata* as a parent. Perhaps modern techniques of pollen storage could be employed to bridge the gap between this species and earlier flowering kinds.

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A DABEOCIAN MISCELLANY

Two St Dabeoc's heaths from Seattle.

ARTHUR P. DOME

4832 54th Avenue South, SEATTLE, WA 98119-1517, USA.

I have not found any *Daboecia* in any literature available to me that has a description that comes close to matching the pink-tipped one (Fig. 1) for which I propose the new cultivar name '**Pink Lips**'. I acquired it as a small plant at some type of horticultural group meeting in Washington or Oregon. This is the first time I ever paid much attention to the flowers on it and I do not know the original source of it. It starts to bloom about 1st May. The lobes at the tip of the corolla turn pink as the white flower matures. After a while, maybe four or five weeks, the pink colour starts to fade away. In new flowers, the pink in the corolla is very light and does not last long after the corolla opens. My plant is four or five years old. I shear most of my heather plants hard back. At the present time (end of August), the plant is still producing new flowers at the tips of the flower spikes, and is about 24 inches (60cm) across and about 18 ins (40cm) high. The new growth for this year ranges up to 16 ins (35cm) including the terminal flower spikes. With proper grooming in the Spring, it develops into a nice full plant with bright green foliage.

The second *Daboecia* of interest is lilac coloured (Fig. 2). Steve Hootman, Curator, Rhododendron Species Botanical Garden, Seattle, got the seed in 1992 from the North American Rock Garden Society seed exchange program. It was sent to the exchange by Jolyon Lea of Amersham, Buckinghamshire, as *D. azorica* (see the following editorial note). It is becoming a very satisfactory garden plant in our area because people seem to like the shade of lilac in the flower, and it tends to be more compact. The cultivar name '**Seattle Lilac**' has been registered for this excellent heather.

As I try to look back, I can remember, while in my 'teens, I was in a neighbor's garden and broke off a sprig of *Erica vagans* 'St Keverne' for a close-up look. I was really fascinated by the multitude of tiny, delicate, perfect pink flowers, each with the little dark brown ring just outside the corolla formed by the anthers. This aroused my curiosity and interest in observing the flowers and close-ups of other heather species. It also presented a challenge for me to try to learn more about them.

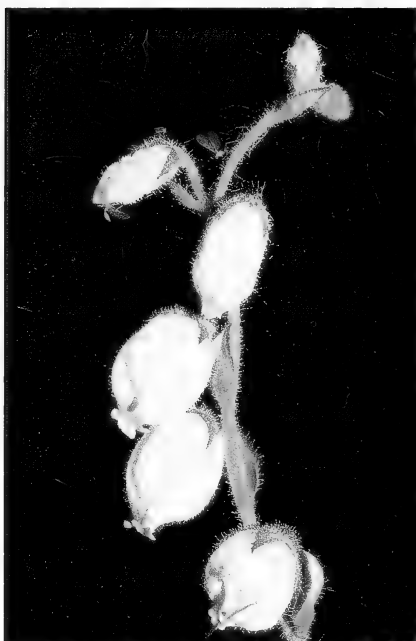


Fig. 1. *Daboecia cantabrica* 'Pink Lips' (photograph Art Dome).



Fig. 2. *Daboecia x scotica* 'Seattle Lilac' (photograph E. C. Nelson).

My garden and its environment will not allow me to grow all the *Calluna*, *Daboecia* and *Erica* plants I would like to. That is why I take any opportunity to take close-up photographs of any cultivar I do not have in my collection. And that is why seeing the wonderful selection of South African *Erica* specimens from Kirstenbosch at the Heather Society's 1995 annual conference in Ireland was one of the many exciting events I have experienced. It gave me the opportunity to add many close-up photographs of these plants I might never have been able to get.

An editorial intervention

I contacted Jolyon Lea about the seed and he kindly informed me (*in litt.* 11 September 1997) that the plant from which Art Dome's seed came was given to him by his brother in 1981: 'He tells me that the plant he gave me was a cutting of a plant he was given in 1973 by Terry Underhill. ... My plant is flourishing after 16 years, growing among other ericaceous plants in the

shade of a 10-foot *Erica arborea* and flowers for months on end.' Mr Lee's plant is growing in a heavy flinty clay, well above the underlying chalk, with an *Escallonia* hedge to the south and a tall tree heath, *Erica arborea* (c. 4m tall) overshadowing it.

In the Autumn 1998, Jolyon Lee sent me specimens of his seed parent. While its flowers were entirely devoid of glandular hairs (a character of *D. azorica*), the flower colour (purple) and especially the fact that the plant blooms continuously into Autumn, strongly points to *D. x scotica*. As noted by McClintock (1978), *D. azorica* blooms in British gardens around the end of May; in its native habitats it is in bloom in mid-June and early July.

Thus, while Jolyon Lea's seed has been distributed as *D. azorica* by the North American Rock Garden Society, seedlings (such as 'Seattle Lilac') raised from this seed should be re-labelled *Daboecia x scotica*.

This leads me to another point. For a long time it has been said that most, if not all, plants in British gardens at the present time labelled *D. azorica* are mis-labelled, and are usually hybrids, variants of *D. x scotica* (this can be traced back at least to Terry Underhill's book, *Heaths and heathers* (1971: 203). I repeated this comment at the Heather Society's annual conference in Norwich in September last, and am delighted that it provoked comments including the following from Dr John Griffiths (see p. 34).

I have also spoken with Barry Starling, who had written to The Editor of *The garden* (February 1998), stating that both *D. azorica* and the Azorean subspecies of *Erica scoparia* had thriven in his garden in Essex for many years.



Fig. 3. *Daboecia azorica* in B. Starling's garden.

'*Daboecia azorica* has an exaggerated reputation for tenderness. It is one of the few ericaceous plants which thrived for me in full sun in Essex. The secret is to plant it where the wood of the branches is fully ripened by the sun before winter. Soft tips may be damaged by frost but in all but the most severe winters the little shrub sprouts and grows away in the spring.'

(Starling 1998)

The evidence accumulating indicates that at least one hardy clone of indubitable *D. azorica* survives in cultivation. There is some circumstantial evidence (see Dr John Griffiths' account, following) that this plant is a relict of the McClintock and Richards 1974 "expedition" to the Azores (see Richards 1976). However in 1969, McClintock did note plants of 'what look like *D. azorica*' in gardens at Corbridge in England and in Mrs Dorothy Metheny's Seattle garden (described in detail in Metheny 1991). As Mrs Metheny obtained her plant in 1963, there is a distinct possibility that more than one clone is in cultivation and that one is of quite ancient vintage, perhaps from the original 1929 introduction (McClintock 1969).

The matter will only be resolved when material of all surviving plants of this hardy, dwarf St Dabeoc's heath are gathered together in one place, grown on and studied.

E. C. Nelson

A hardy form of *Daboecia azorica*.

J. GRIFFITHS

9 Ashlea Close, Garforth, LEEDS LS25 1JX.

HISTORY

I obtained my plant as a small unflowered seedling from Geoff Yates at Tabramhill Gardens in August 1980. He said that it was from material collected in the Azores by David McClintock, so I presume it was from seed rather than cutting material.

I kept the plant in a cold greenhouse for one year and then planted it outside with full exposure to Yorkshire winters (my garden suffers a lot from late frosts and never a year goes by without *Pieris* having its new spring growth destroyed). There it grew slowly for about 10 years, flowering every year and only reaching a size of about 6 inches high by 10 inches across (15 x 25cm). It eventually succumbed in 1990, but by then I had ready another plant from the cold greenhouse which had been taken as a cutting from the original plant. This time I planted it in a well-drained position facing northwest against a rock. It has thrived there ever since 1990 and flowers every year profusely. It is currently 6 inches high by about 12 inches spread (15 x 30cm) and never needs any pruning. Rooted cuttings have been given to Allen Hall in the past and he now has a small number of plants. A plant was given to David Small at the Norwich 1998 Conference, and he will be

propagating from this. I currently have in addition to the outdoor plant two 4 inch (10cm) rooted cuttings under glass which have yet to flower.

CHARACTERISTICS

The bell flowers are cerise (H6) and appear around the end of May, always two to three weeks earlier than *D. cantabrica* or *D. x scotica*. The flowers persist long enough for them to overlap with the early flowers of the latter two species. The flowers are fertile and set seed, both by deliberate self-pollination and by deliberate pollination with *D. cantabrica* pollen. I carried out one controlled experiment two years ago, pollinating clean *D. azorica* stigmas with pollen from *D. x scotica* 'Silverwells'. The seed germinated but the seedlings perished.

The flowering stems of the plant are relatively short and this gives the plant a very "covered" look when in full flower, compared to *D. cantabrica* and *D. x scotica*. Once flowering has finished (after about three to four weeks) the plant never shows another flower for the rest of the season.

PROPAGATION

As mentioned, *D. azorica* can be propagated from seed, but I have yet to do this. Cuttings are not difficult to root, but it is hard to find good cutting material on the outdoor plants due to the woodiness of the stems and the short new growth. Plants grown under glass in low light yield longer stems that are easier to root. Once rooted, the cuttings are difficult to establish – they need good drainage but must not dry out. This is the main reason for the small number of plants that I have been able to produce.

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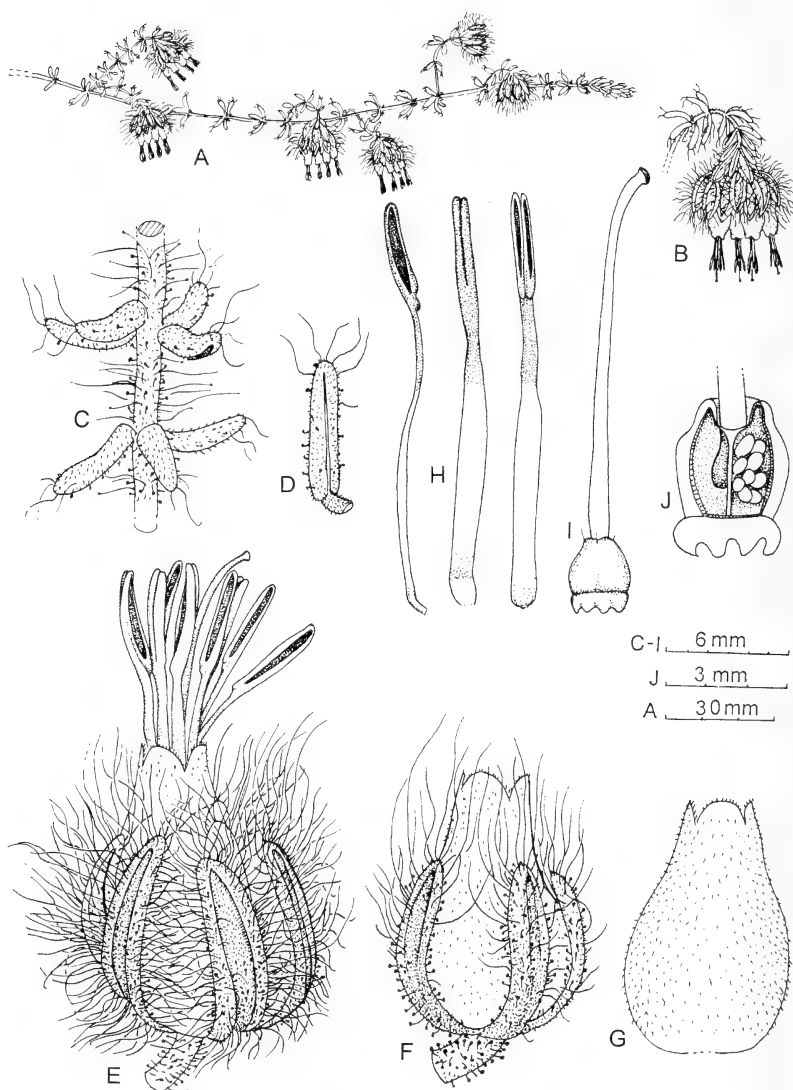


Fig. 1. *Erica hanekomii*. A, flowering branch, half natural size; B, inflorescence, natural size; C, stem & leaves; D, leaf; E, whole flower; F, calyx in relation to corolla; G, corolla; H, stamens, side, back and front views; I, gynoecium; J, ovary cut open laterally. All drawn from the type collection, Oliver 11172.

***Erica hanekomii*, a new prostrate species from the Western Cape, South Africa.**

E. G. H. OLIVER & I. M. OLIVER

Compton Herbarium, National Botanical Institute, Private Bag X7, CLAREMONT 7735, South Africa.

In the last *Yearbook* (1998: 33) we referred to the many new species of *Erica* that need to be described from among the collections already existing in the Cape herbaria. However, there are the occasional new species that have never previously been collected and which are still being brought to our attention. Among several examples of such recent discoveries are *Erica magnisylvae* E. G. H. Oliv. which was first collected in 1997 (Oliver 1997), and the new species described here.

This new species of *Erica* was brought to our attention by Mr. W. J. Hanekom near Citrusdal in December 1997. He subsequently visited the population several times and found that the species has a very long flowering season possibly for most months of the year with a peak in spring and early summer. We visited the site with him in August 1998 (late Winter) to study the plants in the wild. There were quite a number of flowers open as well as fruiting stages, but there were numerous developing buds as well.

Most of the Middelberg ridge had been burnt some five years ago, but there were patches of vegetation that had escaped the fire, mostly in the rocky places. It was therefore encouraging to record that numerous seedlings were noted coming up in the open burnt area around the population.

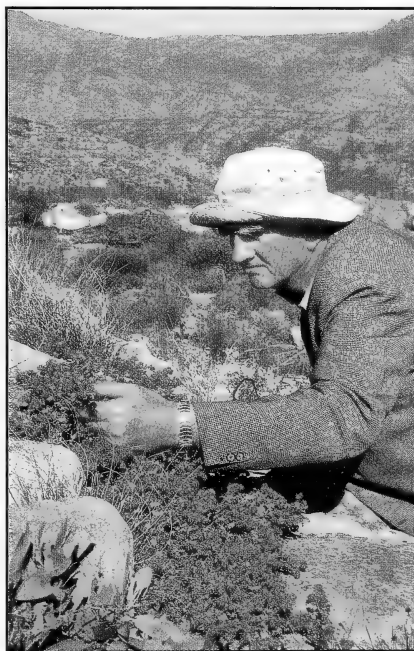


Fig. 2. Willem Hanekom examining his discovery.



Fig. 3. *Erica hanekomii* showing compact, sprawling habit over rocks.

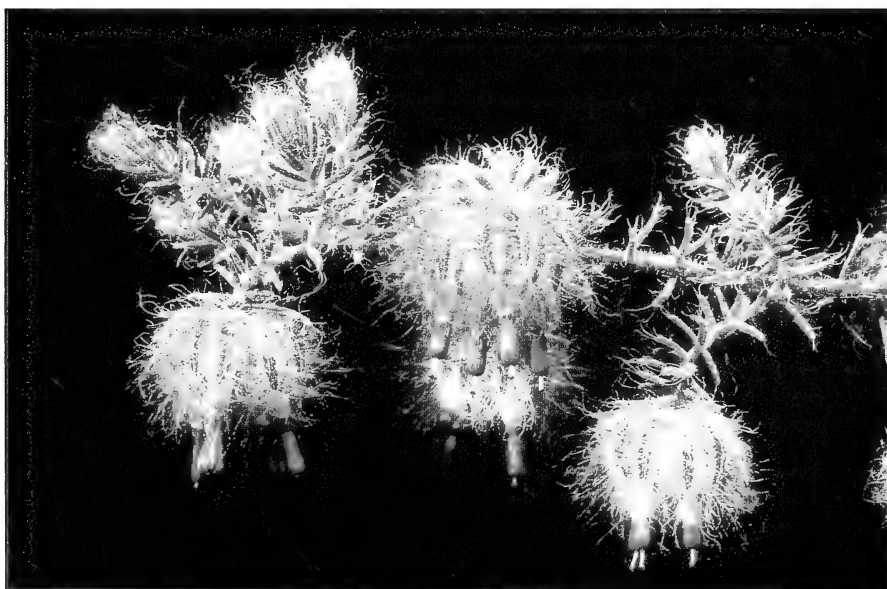


Fig. 4. *Erica hanekomii*, flowering branches.

We then revisited the ridge in early October 1998 to obtain more floriferous material and also better photographs for this article. Instead of going straight to the population previously visited we tackled the highest part of the ridge which is rockier. There we were fortunate to find small islands of unburnt vegetation with a number of plants of the new species, all in good condition and with numerous flowers open.

Most of the plants are low and compact, either spreading over rocks or up into the spaces between rocks. These produce several long spreading branches that grow in amongst the short restiad clumps or other short shrublets. In some cases these branches can be up to 1.5m in length and need to be extricated from the restiads with care.

The plants are rather cryptic in their flowering with only the upper portions of the red flowering heads being visible. Only when the main shrublet or the long spreading branches are picked up does one see the flowers clearly, which in most cases are only a few centimetres above the level of the substrate (soil or rock).

With the relatively large flowers positioned so close to the ground and not visible to flying insects, one immediately wondered what the pollination syndrome of the species could be. No visit by any animals was noted at the time and no syndrome was clearly evident to us. However, there was one unusual feature which struck us when examining the plants. Nearby each shrublet or group of shrublets there were small piles of flowering heads. Each head had the hairy involucreal leaves, bract and sepals removed on one side and there were holes in the sides of the flowers. The neat heaps of flowers were clear evidence of the presence of mice.

Back in the laboratory examination of the fresh flowers showed that some of them contained substantial quantities of nectar so much so that the whole corolla was filled with the sweet tasting, clear liquid. This strongly suggested that the mice were removing flowerheads and probing the flowers for the nectar. This would mean that a small foraging mouse would have to move forcibly under the plants to smell out nectar-bearing flowers and in the process could brush past the far-exserted anthers of other flowers and thereby pass pollen onto the stigmas of other flowers. Freshly open flowers in the laboratory easily shed their pollen when touched.

This leads us to the intriguing postulation that mice could be active in the pollination of *E. hanekomii*, which syndrome is a new one for the genus. This will have to be verified in the field by observation of mouse activities, which usually occur at night. By the setting up of video cameras to observe mouse activity between 7pm and 11pm at night, mouse pollination has been

shown to be the syndrome in several species of ground-flowering Proteaceae in the Cape Fynbos vegetation (Rourke 1980; Weins & Rourke 1978).

We have great pleasure in naming this species after its discoverer, Mr. Willem J. Hanekom (pronounced *har-ne-corn*) who collected plants in the Citrusdal district for many years when on leave from his work in telecommunications in the former Transvaal. Citrusdal is about 160km north of Cape Town. Now that he has retired to the town he has begun a systematic search for interesting and new records and in the process is providing the herbarium with extremely well prepared and documented collections. With a keen eye for anything unusual or different and meticulous recording of details, he has already turned up a few new species.

This remarkable new species is clearly allied to the complex of species that is characterized by a sprawling, almost mat-like habit, the pendulous often involucrate inflorescences, hairy corollas which are usually white, approximate bract and bracteoles which are similar to the narrow elongate sepals (all covered with long hairs), broad filaments, large nectaries, and cross-section of leaves showing numerous sclereids or fibres (over 50) with a thick cuticle and thin single layer of epidermal cells. Species of this group are *E. involucrata* Klotzsch ex Benth. (see Baker & Oliver 1967: t. 127), *E. senilis* Klotzsch ex Benth., *E. eriophoros* Guthrie & Bolus, *E. tegetiformis* E. G. H. Oliv. (see Schumann & Kirsten 1992: 185, 186) and *E. greyii* Guthrie & Bolus and all occur in the same part of the Cape Florist Region, namely Tulbagh/ Ceres northwards to the Cedarberg of Citrusdal and Clanwilliam.

Erica hanekomii is easily distinguished from the above-mentioned species by the red-hairy, involucrate, pendulous, much larger inflorescences, the well-exserted stamens with very large pores but without any appendages, and the glabrous ovary. It is perhaps most similar to *E. involucrata* with its pink heads of flowers and the leaves with the same characteristic appressed petiole and reflexed lamina, but the latter has plumose, gland-tipped hairs on most organs (including the ovary) and the cup-shaped corolla is hidden by the broad pink involucreal leaves, bract and bracteoles and spurred anthers with relatively small pores. *E. senilis* occurs near the populations of the new species but has all white flowers (including the stamens) and the corolla and stamens are completely hidden within the very hairy heads.

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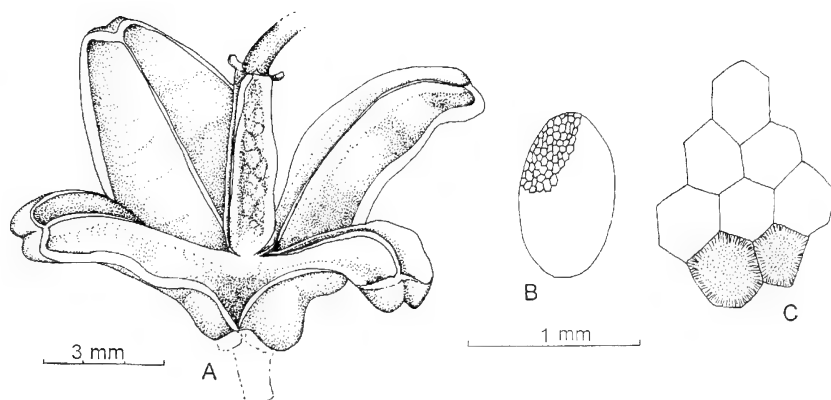


Fig. 5. *Erica haneekomii*. Fruit details; A, capsule; B, seed; C, testa cells, each 70 x 55 μm. Drawn from Oliver 11172.

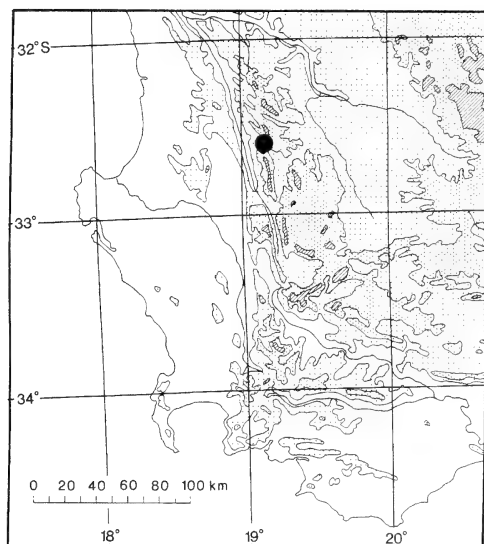


Fig. 6. The known distribution of *Erica haneekomii* in the Western Cape, South Africa.

***Erica hanekomii* E. G. H. Oliv., sp. nov.**

Species in genere distincta propter habitum prostratum repentem, inflorescentias involucratas pendulas pilis multis rubris, antheras bene exsertas poro magno et sine calcaribus, ovario glabro.

TYPE: SOUTH AFRICA, Western Cape, 3219CA, Citrusdal District, Middelberg ridge, just north of summit of Middelberg Pass, on rocky east slope, 1200m, 5-10-1998, *Oliver 11172* (NBG holo.; K, PRE)

Prostrate, sprawling, sparse to matted **shrublet** to 10cm tall and up to 1.5m wide, single-stemmed reseeder. **Branches:** several main branches sprawling up to 1.5m long, mostly continuing growth, occasionally terminating in a florescence; numerous secondary branches 15–100mm long, the longer ones sometimes with tertiary branchlets, all ending in a florescence, internodes on main branches ± 4 mm long and on lateral branches ± 1.5 mm long; indumentum of numerous short spreading hairs with fine hairs ± 1.5 mm long admixed, these eglandular or glandular. **Leaves** 4-nate, of two types; normal vegetative leaves 3.5–6.0 \times 0.8–1.0mm, reflexed with petiole appressed, narrowly oblong to lanceolate, margins subobtuse, narrowly sulcate, green, puberulous with short fine eglandular hairs and longer stouter glandular hairs admixed and longer eglandular hairs towards the apex; leaves just below inflorescence 7.0 \times 1.3mm like bract but slightly narrower, reddish; petioles appressed, puberulous. **Inflorescence:** flowers 4-nate in 1, occasionally 2, whorls as pendulous heads terminal on secondary branchlets; pedicel 2mm long, puberulous with eglandular or glandular hairs and sometimes longer hairs admixed; bract partially recaulescent and approximate to calyx, 7.0 \times 1.8mm, oblong-elliptic, apex acute, subopen-backed to widely so, red, puberulous with numerous fine hairs and a few gland-tipped hairs and with numerous conspicuous simple hairs 2–4mm long admixed, these white to red when facing sun; bracteoles 2, like the bract but slightly smaller. **Calyx** 4-partite or very slightly fused at base; segments nonimbricate, $\pm 6.4 \times 1.0$ mm, narrowly oblong, subnarrowly sulcate in upper half, indumentum and colour like bract and bracteoles. **Corolla** 4-lobed, 6.0 \times 4.0mm, ovoid-ampullaceous, exserted ± 2 mm beyond bract/bracteoles/calyx complex, puberulous with reflexed hairs, white with green tinge often reddish towards sunny side; lobes erect, small, 0.5 \times 1.0mm, rounded, shortly ciliate, white turning brown. **Stamens** 8, free, far exserted; filaments $\pm 7.5 \times 0.4$ –0.6mm, straight, flat, lower $\frac{2}{3}$ white, upper $\frac{1}{3}$ golden-yellow to reddish brown; anthers bilobed, oblong, golden brown, muticous; thecae 2.7 \times 0.5mm, oblong, appressed; pore $\frac{4}{5}$ of theca, almost slit-like; pollen as tetrads. **Ovary** 4-locular, 2.0 \times 1.5mm, ovoid, emarginate, green, with a few apical hairs, nectaries large, yellow; ovules ± 14 per locule, spreading to suberect from placenta in upper half; style 9mm long, exserted, straight becoming apically curved with age, glabrous, white; stigma capitate, small, greenish. **Fruit** a dehiscent capsule, golden brown, valves free from columella and splitting to nearly 90°, with small basal pouches, septa equal on valves and columella; seeds 1.0 \times 0.6mm, ellipsoid, rounded in transverse-section; testa dark brown, alveolate, medium thick, cells subequal, 4- or 5-polygonal with straight anticlinal walls, anticlinal and inner periclinal walls well pitted.

Paratypes: Western Cape. 3219: (-CA), Citrusdal, Middelberg, 1150m, 1-11-1997, *Hanekom 2932* (BOL, K, NBG, PRE); Middelberg ridge, north extension between Witberg & Grootberg, 1160m, 18-08-1998, *Oliver & Hanekom 11108* (K, NBG, PRE).

Observations and experiences in searching for heathers in the wild in Ireland.

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Having read the late Major Walter Magor's account of an Irish tour in the 1981 *Yearbook*, I went to Connemara for the first time in the summer of 1982 and since then I spend a week each year "tramping" the bog lands of Connemara in search of new cultivars.

My first and best find was in 1986 when I discovered *Daboecia cantabrica* 'Celtic Star' on the Errislannan Peninsula (Nelson 1990, 1992). It is characterised by a strange bright red calyx against a pale lavender bell (see illustration on cover of *Yearbook* 1994, and also p. 14). Unfortunately the original plant did not survive a subsequent gorse fire. Also, in 1986 I discovered *Daboecia cantabrica* 'Clifden' at Clifden Bay. The crimson flowers of this plant are a good contrast to the dark foliage (registered 1990; see *Yearbook* 1998: 74).

On a visit to Errislannan in September 1990 and near to the site of 'Celtic Star' I found *Daboecia cantabrica* 'Celtic Flame' which has a bright magenta (heliotrope) corolla (*Yearbook* 1998: 73).

Prompted by David McClintock's find of *Erica x stuartii* 'Irish Lemon' and 'Irish Orange' at Lough Nacung at the foot of Errigal Mountain in County Donegal, I visited the area in Spring 1989 and noticed many plants with yellow and orange new growth on a turf cutting patch. When I drew the attention of a turf cutter to the unusual heather, he replied that he had been cutting turf there for many years and hadn't noticed it. It is necessary to visit in the Spring as the young growth eventually reverts to green. I did, however, notice a few isolated clumps with rose-tipped shoots from which I successfully propagated *E. x stuartii* 'Irish Rose' (McClintock 1993).

My visit to Connemara in August 1991 resulted in finding *Daboecia cantabrica* 'Celtic Snow' (see this *Yearbook*: p. 68; see also *Yearbook* 1998: 73) on high ground above the Sky Road, near to Clifden. This is a prostrate plant with intense white flowers.

On one occasion I had a distressing experience when searching for heathers. I had gone to an area near Roundstone where more than 150 years ago James Townsend Mackay (see Mackay & Nelson 1997) recorded finding



Fig. 1. The original plant of *Daboecia cantabrica* 'Celtic Snow' in the wild in Connemara (photograph David McLaughlin).

E. erigena. Having discovered a few *E. erigena* plants along the side of a small stream, I then proceeded to search the adjoining area for more plants. With my eyes firmly directed towards the ground I walked in circles for about 15 minutes. I then decided to return to the car where my wife was waiting for me. To my dismay I realised I was completely lost. Every direction in which I looked the vista was exactly the same – rocks and heather extending to a ridge of high ground about two miles distant. It was late evening, there was no sun, the sky was overcast and I didn't have a compass. My main concern was that if I didn't return soon my wife would be extremely anxious. Then I remembered the little stream and knew the direction in which it flowed. I knew if I found the stream I could find my way back. With relief I eventually found the stream and the pathway back to the car. Since that experience I always start by taking stock of my surroundings, and I carefully establish my bearings before setting out on a search.

Another important fact that I have learned while searching for heathers in the wild is that a dull overcast day is best. The flower colours stand out more vividly when the weather is dull and the heather is wet. So on a hot summer's day when the boglands are shimmering in a heat haze, making

colours indistinguishable, you would be better to head to the nearby beaches of Gorteen or Dog's Bay. Here one may have the good fortune to find exotic seeds that have floated all the way across the Atlantic from the Caribbean.

Connemara is a heather enthusiast's paradise. In addition to the heathers already mentioned, bell heather, *E. cinerea*, is widespread and during a day's search one will notice many plants with flowers and habit just like those of cultivars already in cultivation. July and August are best months for heather-hunting and good areas are Errislannan, Craiggamore – where Mackay's heath, *E. mackaiana* was first noticed by William McCalla (a local schoolmaster) in 1835 –, Roundstone, and Carna where Charles Nelson discovered the very fine double-flowered *Daboecia cantabrica* 'Charles Nelson'.

Two heathers found in Ireland seem to occur far beyond the general geographical range of the species. These are the Cornish heath, *E. vagans*, in County Fermanagh, and Dorset heath, *E. ciliaris*, in Connemara. *E. ciliaris* occurs, conveniently, at the side of a bog road, but *E. vagans* grows far from the beaten track. How did they come to be there? Are they pre-glacial survivors, or, did some mischievous botanist plant them there to mystify other botanists? It is of interest to note that a patch of *E. vagans* protected from grazing animals by a fence is struggling to survive among the now vigorous grasses and shrubs, whereas plants in the grazed area are healthy. The heather appears to benefit from the browsing of animals.

There must be more plants out there waiting to be discovered so take a holiday in Connemara and don't forget to bring your Wellingtons, mackintosh and a suitable container for your cuttings.

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Editor's note

Taking cuttings, *in moderation*, of special or unusual heathers is the only way by which new cultivars enter our gardens from the wild. *In moderation* has to be the key phrase. Only remove sufficient cuttings to establish a plant. Under *no* circumstances should you dig up or remove a heather from the wild. Almost invariably such a plant will perish, and the cultivar or the interesting heather will vanish. (See 'Wild and endangered plants in cultivation', *RHS conservation and environment guidelines*, May 1997.)

Lyngen fortæller: the lore and uses of heather in Denmark, and the origins of the word ling.

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One of Denmark's eminent prose writers wrote: '*Glemslen er som lyngen, den gror kun af sig selv, alverdens fredning og røgt lægger ikke en tomme til dens vækst.*' 'Forgetfulness is like heather, it only grows by its own effort, all the protection and care in the world does not add an inch to its growth.' Of course this is not true for heather growing in a nursery or in a garden.

Fencing and protection of heathland often results in the heather itself slowly but surely disappearing. Extensive management – farming – of heathland in olden times was what ensured its survival. Thus heather, and names linked with heather, disclose cultural history like few other objects.

Heather is generally thought to thrive only on acid soil, yet in the wild it often seems fairly indifferent to pH and can be found growing on land where the subsoil contains lime, potassium and phosphate as, for example, on the island of Bornholm. In the past, it was present in Jægersborg Dyrehave (an area north of Copenhagen), and on the stumps of toppled trees, heather seedlings could appear in masses. Heather is not very competitive, and more vigorous plants will eventually shade out the heather, eliminating it. High relative humidity does aid the spread of heather, which means it can grow in the partial shade of mature trees because such a habitat will be more humid than a wide open one.

As to soil nutrients, heather is easily pleased. It can grow on sand dunes, parts of which (the dune slacks) may be wet for long periods, and thrives on the deep layer of accumulated plant-litter where the breakdown of dead organic matter is almost non-existent, and thus nutrient release is very slow. Thus in the distant past heather grew especially well and expanded its range in west and mid-Jylland (Jutland) where the impoverished woodlands were decimated by the scattered human populations. Being able to tolerate grazing, burning and cutting, heather colonized vast areas where goats and sheep, in particular, kept down sapling trees.

USES OF HEATHER

Heathland farmers used heather for many purposes. It replaced wood from forests. It was cut for winter forage. Branches were used for thatching, bedding, brooms, litter for animals, and even road filling. Heather was used



Heathland in mid-Jylland (Jutland), Vråds (photographed by Thorleif Bjørgbak).

for dyeing cloth, giving brown-red, lemon yellow and green. From the woody stems people could carve rake pegs and shoe plugs (in bygone days soles were plugged, not glued).

Heather turf also played an important part in people's lives. Thick turves were cut using a special spade. Each turf has a coarse layer of heather on the upper surface. The turves were burnt in stoves, but a load of heather turves could often have an adder as a stowaway! The earliest people built houses of heather turves, or piled them up so that thin-walled houses, which were made draught-proof with clay (the daub of wattle-and-daub), were insulated on the outside.

THE NAMES

On the west coast of Odsherred where summer cottages now are abundant and where the soil consists of sand deposited when the sea extended one or two kilometres further inland, there were heaths like those in mid-Jylland. From Sjællands Odde southwards to Høve Stræde you encounter place-names like Tengslemark Lyng, Højby Lyng, Ellinge Lyng, Vig Lyng and Jyderup Lyng. In other parts of Sjælland and on Fyn too, you also find place-names like Lungen, Lunghuse, Magleby Lung and others in these low-lying areas. In former times they were covered by peat bogs where peat was cut.

Lyng and *lung* in Danish are the same word. (Evolution from u to y, or u to i is well known from other words; for example *synger* (in English, sing) and *sunget* (in English, sung).) Moreover, a derivative word is *lunge* (in English, lung), the organs we all have in our chests. The meaning of *lunge* is known; the *Shorter Oxford English Dictionary* states that ‘the lungs are so named because of their lightness’. Hence the English word lights used, according to the *Shorter Oxford English Dictionary*, only for ‘the lungs of sheep, pigs, bullocks, etc., used as food (especially for cats and dogs).’

When we consider that the Danish names for many soil types refer to their consistency – for example, the Danish word *mile* (for dune) means powdery, *ler* (for clay) means sticky, *sump* (the English word swamp is the same) – there can be no doubt that *lyng* or *lung* originally alluded to the fact that heather turf is light (in weight) when dry. This is easily observed by comparing heather turves and grass sods. The latter are heavy. In olden times both kinds of turf had important roles.

Thus it is not difficult to discover a credible explanation of the word *lyng*, a turf, and extend this to *lyng*, the area, and from that to a place-name like Højby Lyng. It follows the same pattern as: *mile* (the type of soil), to *mile* (the area), and to Råbjerg Mile (the place).

Finally, when we attempt to find an explanation of the plant name *lyng*, it is in fact quite simple. (The *Shorter Oxford English Dictionary* stated that *ling* is a Middle English word derived from the Old Norse word *lyng*, ‘of unknown origin’.) We all know the concept of contact association. Consider such expressions as “He ate all the dish” or “He drank only half the glass”, where, of course, we mean the *contents* of the dish or the glass. When the “heath blooms”, it is the plants of the heath that blossom and especially the heather. It is a simple process whereby the word *lyng* has gone from meaning the area – originally the type of soil in that area – to the meaning of the plants, or the single plant, growing there.

In old sources, *lyng* not only meant *Calluna vulgaris* but also other small shrubs like crowberry (revling in Danish, *Empetrum nigrum*), bilberry (blåbær, *Vaccinium myrtillus*), cowberry (tyttebær, *V. vitis-idaea*) and even creeping willow (krybende pil, *Salix repens*). But because *Calluna* and cross-leaved heath (kløkkelyng, *Erica tetralix*) were the most common on the heaths they became the plants people meant when they spoke about *lyng*.

Editorial note: originally published in *Haven* 86: 508-511 (1986) (see *Yearbook of The Heather Society* 1995: 66). This translation was made by Brita Johansson, with the kind assistance of Erling Johannesen and Jens Kjærbøl (who provided the original text). For permission to publish this translation, we are most grateful to Professor Lange.

Heather (*Calluna vulgaris*) in Norwegian folk tradition.

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Heather (*Calluna vulgaris*) is widespread in most of Norway, especially along the country's western coast, but extending well into the more severe environments of the extreme north and up into the mountains. In southern Norway, *Calluna* has been recorded at altitudes exceeding 1000m above sea level, with 1450m above sea level as the maximum elevation (Elven 1994).

Only on the extreme north coast of Finnmark in northern Norway does *Calluna* succumb to cool summers. Still, prostrate plants, Fig. 1, have been recorded at some stations at Magerøya, the island where the North Cape is situated. Skipsfjorden, a place slightly southeast of this well-known landmark, must be the northernmost station for *Calluna* anywhere in the world, at 71° 1' North latitude (Alm 1993).

Calluna heaths are widely distributed in Norway's coastal areas. In particular, they are a prominent feature of the most oceanic areas, extending northwards to the Lofoten Islands in north Norway. Further north, the *Calluna* heaths are largely replaced by subarctic *Empetrum* heaths, dominated by crowberry (*Empetrum nigrum* subsp. *hermaphroditum*).

VERNACULAR NAMES

Calluna is one of those plants most Norwegians know and recognize; maybe less so nowadays than in former times. In the southernmost parts of the country, especially in the Agder counties, it is simply known as *lyng* – a name which in most of Norway is applied in a general sense, to cover all Ericales species. But in accordance with the northwards shift from *Calluna* to *Empetrum* as a dominant heathland species, people in northernmost Norway would take for granted that an unspecified *lyng* was crowberry.

More frequently, however, *Calluna* names have a qualifying epithet. The bulk of these are variations on a common theme, with *røsslyng* as the most frequent version (also used as an official Norwegian name). Many other variants exist, e.g. *røsjlyng*, *rysslyng*, *ryslyng*, *brysslyng*, etc. (Gunnerus 1766: 14; Høeg 1974). According to Lagerberg *et alii* (1956), their common derivation is a Norwegian dialect word, *ryssa*, meaning a mare (a female horse; in modern Norwegian usually called *hoppe*, *merr*). Thus, *røsslyng* and all its variants could be translated as horse-heather. A straight-forward vernacular name, *hestelyng*, meaning horse-heather even to present-day Norwegians,



Fig. 1. *Calluna vulgaris*, ling, at the northern part of the Porsanger Peninsula, northern Norway, at 70° 48' N. latitude, in an environment devoid of trees. A single plant was found growing in a sheltered valley. Its branches were prostrate, which is the predominant habit of all wood species in this wind-exposed habitat. (Photography T. Alm, 16 August 1990).

is frequent in western Norway (Høeg 1974). All these names may derive from a frequent practice of collecting *Calluna* for fodder (see below).

A curious variant of *røsslyng* occurs in the Lofoten–Vesterålen islands of north Norway, where *Calluna* is commonly known as *røssbærlyng*, a name first recorded by Johan Ernst Gunnerus (1766). To a present-day Norwegian, the inserted *bær* would mean berry – and thus the whole name could be rendered as horse-berry-heather. However, even the Lofoten Islands, famous for their alpine scenery, do not possess such wonders as a berry-producing *Calluna*. An alternative hypothesis may be offered: *bær* could be related to the verb *bære*, meaning to carry, or support, or sustain. If so, *røssbærlyng* could simply be the heather that sustains the horse (through the winter) – an elegant and, to my knowledge, hitherto never proposed explanation.

In addition to names based on the horse-heather theme, *Calluna* bears a number of other Norwegian names. Deviant names, also related to its widespread use as fodder, occur in particular from western Norway northwards (Høeg 1974). Typical examples are *kulyng* (cow-heather), *bulyng* (in Norwegian *bu* means livestock or cattle), *saualyng* (sheep-heather), etc.

As would be expected, the Sámi of North Norway use another seemingly different name for *Calluna*. It is called *livdnju*, translated into Norwegian by Qvigstad (1901) as *lyng*, that is heather in a general sense. The name may well be borrowed from the Norse *lyng*, as Ericales in general are otherwise known as *danas* in Sámi. The latter name is also sometimes used for *Calluna*, at least according to Gunnerus (1766: 14).

CALLUNA AS FODDER

The above paragraphs about vernacular names have already suggested some of the main uses of *Calluna* in Norway: as fodder. Scything, cutting or otherwise collecting heather for cattle fodder has been widely practised in Norway, mostly in the country's southern parts, but extending northwards at least to the Lofoten–Vesterålen islands of North Norway (Mørkved 1996a). There is no obvious pattern in the season when harvesting took place, or in the method of collection – sometimes it was gathered in Autumn, but according to others in Spring when and if the need should arise.

In the far north, *Calluna* was largely substituted by *Empetrum*, also frequently collected as a supplementary fodder, for example in Finnmark (Alm 1994). In addition, fish provided much fodder. Fish remains were a staple fodder, usually mixed with *Empetrum*, birch twigs, kelp or other plants. Or, to quote a sentence from Arthur de Capelle Brooke's classic travel account of North Norway, written in the early nineteenth century, relating to an observation in Hammerfest, Finnmark (Brooke 1827: 296): 'The English farmer will, doubtless, feel not a little astonished ... that the whole of the cattle in Finnmark are, *mirabile dictu*, fed upon fish.'

To increase the production of new shoots, the *Calluna* heaths of Western Norway were commonly burnt, usually at regular intervals (every third year). In North Norway, there is no record of such burning (Vorren & Alm 1983).

CALLUNA IN FOLK MEDICINE

The few records of *Calluna* used in Norwegian folk medicine, have no consistent pattern in terms of geography or preferred uses. An interesting note is given by Wille (1786: 111), in his description of Telemark in South Norway. Translated from Danish, he wrote, 'if a person had cut himself [with axe or scythe], (chopped) heather is placed on the wound to stop the blood, (a practice) which people seem to have learned from the bear, who rolls himself in it, if he has been wounded, and the blood will stop.'

At some places in South Norway, the buds and finer shoots were collected and boiled in water; the resulting drink was supposed to enhance sleep (Høeg 1974). A similar extract has also been used against tuberculosis

in Hemsedal, South Norway (Quisling 1918: 33). A few records from South Norway hint at a slightly more widespread practice of using lyng boiled in water against stones in the urinary tract (Reichborn-Kjennerud 1922).

OTHER TRADITIONAL USES

In addition to its (possibly somewhat dubious) medicinal virtues, *Calluna* has been collected for a number of other purposes in Norway, e.g. for making scrubbing brushes and brooms (Høeg 1974). The soft top shoots have also been harvested as filling material for beds. The coarser or woodier parts have been gathered for fuel, especially in treeless areas along the coast.

Dyeing with *Calluna* was commonly practised in olden times (Høeg 1974; Mørkved 1996b). It was usually mixed with birch leaves, producing a yellow colour. Green was obtained by adding other substances.

Høeg (1974) noted some more curious traditions relating to *Calluna*. In Langesund in South Norway, specimens with white flowers were supposed to signify the site of a crime.

And, we should not forget the children: the sweet flowers of *Calluna* have been gathered and eagerly eaten by youngsters who are always good at identifying Nature's small treats (Høeg 1974; Alm 1983).

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THE HEATHER SOCIETY'S PROCEEDINGS

President's introduction

The great loss in an otherwise happy Society has been the death of Bert Jones. In this *Yearbook* you may read of his conscientious work and scholarly contributions to our knowledge of heathers. So, all I shall say here is what a loss he and his advice will be to me personally as well as to the heather world; to express my thanks for what he did, especially what he managed to achieve in later years during his dire illnesses; and to express my sincere sympathy to Diane and their two sons. I hope you have seen their book *Conifers and heathers*, all entirely their own doing.

Yes, a happy Society, and never more so than at the conference at Norwich, arranged by Phil Joyner who did a very good job. It was sad that only some 50 or so attended out of our 650 members. The others missed good company, good visits and outstanding talks. New year perhaps Falmouth will prove a more attractive venue. But, gird up your loins for the great international meeting we are contemplating for 2000, probably based in northern Germany – the proceedings will be in English! We hope for a large attendance from all the heather societies.

We were proud that David Small was asked to give the key-note address to the conference at Seattle of the North American Heather Society. Thanks are also due to Ron Cleavelly for attending specially the international taxonomic conference at Edinburgh, to show the poster about the Society which he had prepared in collaboration with Bert Jones and David Small. It produced useful contacts and was on show at the Norwich conference.

DAVID MCCLINTOCK
President, The Heather Society

28th Annual Conference City College, Norwich, Norfolk 4 – 6 September 1998

A chance to visit the Mustard Museum could not be missed, so after two weeks of wandering in Bulgaria and seeing such horticultural sights as the largest collection of cacti in the Balkans, I made ready to attend the The Heather Society conference in Norwich. The only decision that had to be made, after spending a few nights in Wisley, was whether to start my journey driving east or west on the M25. Being an American, I drove west and was soon seeking out those round-towered parish churches, so common in Norfolk.

Soon the friendly faces of Beryl Mayne and Anne Small greeted me and I knew I was in the right place. Over tea and biscuits I met and renewed acquaintanceships with the 38 other members in attendance. While this was the smallest group since I have been attending, there was the same enthusiasm for the topic and members were present from Norway, France, USA and many parts of the British Isles.

The facilities for the conference were fine and the various rooms used were all central and in close proximity, one to the other. The food and ambiance in the dining room was excellent with fresh fruit and seconds on sweets available – we did miss elbowing those Saga ladies this year – and those vases of heather set the tone. Perhaps the fact that this college had culinary arts courses allowed for this posher setting?

Then it was time for the conference to be opened by our chairman, David Small. He welcomed those in attendance and paid tribute to Bert Jones, who died on 26 August and told of his contribution to the Society and his warm friendship with him during those years. Dr. Charles Nelson (of *Daboecia cantabrica* ‘Charles Nelson’ fame), board member and editor of the *Yearbook*, who now resides in Norfolk, then spoke on how he became interested in heathers. He showed slides of “wild heathers” he had sought out and studied in Ireland, Turkey, Spain, the Azores, Majorca and Madeira.

A dark, wet Saturday morning was enlivened by a talk by Andy Millar, Conservation Officer for English Nature, on “North Norfolk Heaths and Mires”. His is a governmental agency charged with the protection of designated sites. He discussed the geology of the area and the fact that heathlands date back to the Stone Age and beyond and are a very ancient part of our modern landscape. As the Ice Age retreated and vegetation moved northward, heathlands were a direct result of this natural process. By the end of the eighteenth century, heathlands covered more than 200,000 hectares (500,000 acres) and vast parts of this were in East Anglia. Today there are only 1,500 hectares of heathland left in Norfolk, with 100 hectares located within the boundaries of Norwich. It is one of the few cities in England with heathland within its boundaries. (We were able to see this heathland, from our bus, as we journeyed back from one of our field trips.)

From the Bronze Age to World War II heathlands were said to be a resource for local people. They were rich in wildlife and native plants. Those in Norfolk are especially known for the running toad (natterjack toad), butterflies, crickets, and the black darter dragonfly. However, in the last 50 years heathlands have been encroached upon and without proper management of land-uses, may continue to decline. Approval has been granted in Norfolk for 90,000 new houses in the next ten years. These will further deplete the ground water table and cause other problems to the heathlands. Thus, English Nature must be ever on their guard and enlist groups like The Heather Society to assist in publicizing and maintaining this great British natural resource.

Then it was time to be off on the bus to Kingfisher Nursery, at Gedney Hill, south of Spalding, in Lincolnshire, with a brief stop to see the Queen, along the way at Sandringham. The rains came and the rest stop at Sandringham allowed a few to visit the castle briefly, others to wander the woodland path and most to take tea and chat and admire the Queen's Bramley apples in the sales area. It is unfortunate that some were unable to see the small island heather bed that the Queen is said to have had planted within view of the house. Part of the Sandringham Estate is under the management of English Nature as the Dersingham Nature Reserve.

The rains increased as we disembarked from the bus at Kingfisher Nursery, but the warmth of the staff in their greeting, explanation of the work at the nursery and their TEA far outweighed the bit of moisture in the air. The group was split into three groups, each with a staff member as guide. This is a very modern, 6 acre nursery that produces 150 varieties of heather in 9cm, 1.5, 3 and 7.5 liter pots. Everything is computerized (the program having been developed by our own David Small). Propagation is done from August to February of each year, in a huge, modern, acre glasshouse. Major garden centers throughout the eastern part of Britain are supplied with plants.

A million and a half cuttings are taken and planted a year. Students are paid, on a piece-work basis, to strike the cuttings. They are placed in plastic flats, under plastic, in this huge glasshouse. Vents and shades are operated automatically by computer and the building is said to be built so high, to maintain the proper air temperature and humidity to root the cuttings. No irrigation or bottom heat is provided until the cuttings are rooted. Then liquid feeding is provided. *Erica carnea* cultivars take about 6 weeks to root and *Calluna* will root in three weeks.

These flats of rooted cuttings are then taken to another huge building where they are potted by the use of a semi-automatic potting machine, of the nursery's own design. They use their own home-mixed peat/grit compost, and holes are dibbed by a 20-prong dibber, with each prong molded to take the size of the plant being produced. On their best day in 1998 staff put out 26,000 plants in 9cm pots. They can do 25,000 plants a day into 1.5l pots and 20,000 a day into 3l pots. They use 14-month Osmocote for fertilization in their potting mix. The filled and dibbed trays of pots move along the conveyor line and are filled with plugs or plants, by staff on both sides of the belt.

The filled trays are then lifted by forktruck on to trolleys and taken to the outside beds. These are alphabetically laid out, by plant name, in capillary beds. Lucky for our group, on such a wet day, concrete roads and paths separate these beds. There are 5,000 pots per bed and watering is controlled (by the sky) and little toilet-like tanks, at one end. *Bergenia* plants in each bed act as beacons to show the presence of vine weevils.

Tea and biscuits and more conversation with staff were enjoyed by all and we had the opportunity to purchase some heathers. Five are now planted in my garden in New Hampshire and I hope that *Empetrum nigrum* 'Bernstein' survives the winter here. A great visit to a great nursery!

That evening the AGM was held and it has been adequately covered in the *Bulletin*. Suffice is to say that regrets were presented from Board Member, Bob Rope and we all wish the family renewed good health. There was a very moving tribute to Bert Jones and all participated in a moment of silence in his honor. Concern was raised about the loss of membership and plans of the board and officers to raise new interest in the The Heather Society were discussed.

The Society is producing a series of booklets on heathers and companion plants and, of course, a new edition of the *Handy guide to heathers* has been published. The Heather Society plans to sponsor school competitions to "Design a Heather Bed" with plants being given as prizes. It is hoped to start the scheme in schools in Devon or Somerset. Our Treasurer, Allen Hall, reported the highest amount of assets in The Heather Society's history.

During the Open Forum, members discussed the possibility of future field trips to such places as Spain, France, Holland and Germany. An update was given on the 1999 trip to South Africa, and the possibility of an international heather conference in 2000 in Germany was mentioned.

Sunday started with an illustrated talk by Dr Ian Small, of INRA, France, on "The Diversity of Plants" or "Genetic Engineering Made Easy" It was a well made presentation of what could have been a very complicated topic. Dr Small made use of many slides to explain the concept of obtaining the DNA of plants and how the process was arrived at in the laboratory. Kurt Kramer was one of the first to make use of this DNA process on heathers to protect one of his patented cultivars, *Calluna vulgaris* 'Alicia', from incursion by another nursery which was offering the same plant, under a different name. All who attended this lecture agreed that we should have had more time for the question period and to absorb the various aspects of the well-presented material. It would certainly be appropriate to include an article on this topic in a future Society publication.

But it was back on the bus for a trip through the flat terrain of The Fens, with their drainage canals, to Winterton-on-Sea and the Horsey Dunes. We were met by Rick Southwood of English Nature, who took us on a tour of the reserve. The site is unusual because, unlike most of the other areas of dunes along the North Norfolk coast, where the sand is calcareous, this site supports acidic plant life. There are large areas of both heaths and heathers on the landward side of the dunes, the



Fig. 1. Conference goers on Winterton Dunes enjoying a rest before continuing their search for white flowered forms of the three species of heather to be found there and for the elusive Natterjack toad.

[Eileen Pettersen]

dominant type being *Calluna vulgaris*, with some *Erica cinerea* and *E. tetralix*. It was odd to see these plants growing in what appeared to be almost pure sand. In searching among them, many pure white flowered varieties could be found.

On the seaward edge of the dunes various grasses had taken hold, such as marram grass (*Ammophila arenaria*) and lyme grass (*Leymus arenarius*). Various ferns had taken hold on the older, inward dunes along with sedges. Behind the dune area there were some damper areas full of various *Dryopteris* spp. and *Osmunda* (royal fern), various rushes and grasses leading into low woodland, with many birch trees. An area of private land bordering the Reserve had been fenced and through private persuasion by English Nature staff the heathland on it was being maintained by the use of a limited number of sheep grazing on it.

This area was said to have very well formed dunes and while there was some erosion, more sediment was usually deposited than was lost, allowing for a constant buildup. But it was time for us to feed the inner man and groups sat in the warm (wet) sand to eat the bagged lunches. Some among us had protested the prior day's inclusion of canned soda, so today food was washed down with odd fluids in little boxes. No doubt some of the fruit was raised on land cleared from the rain forests, but these little boxes (with their non-biodegradable straws) made some

happier as they sat and enjoyed the plant- and people-life around them. Then it was time to line up on the top edge of a dune for the annual picture of the group. Always a jolly time enjoyed by the “takers” and those “taken”.

But we had not yet seen a running toad. There were said to be some four hundred in the area and their breeding places were the old bomb craters left in the sand. Then a cry went up! Arnold Stow had found a toad. The group descended upon it and it is now probably the most photographed toad in the world. Shortly thereafter, another toad was found but that was the lot for the day. It was time to meander back to the bus. Some took the high road, along the top of the dune path. Some took the low road, walking in the heathland behind the dunes and some walked along the beach. The weather had cleared, the sun was bright. We had seen our favorite plants, in abundance, growing in what one would think would be a rather hostile environment and we had seen a toad that runs instead of hops. Yes, there was a place for TEA, before boarding the bus.

On the way back to City College we stopped at one of the tourist towns along the way. Our last stop of the day was in front of Norwich Prison. An odd place, you may think? However, while most of the rest of Norfolk is flat and fenny, Norwich is rather hilly and one of the best views of the area is from the front of the prison. Then a final evening meal and farewells to the two couples who were staying in caravans and wouldn't be back in the morning. A brief gathering where some additional concerns and suggestions of members were voiced and some further discussion of the contest to name the 20 best cultivars of heather, won by Ian Small because Andy Collins' list consisted of newer hybrids so did not conform to cultivars picked on prior lists. Recognition was given to Phil Joyner for his year-long efforts to bring about a successful conference and he was presented with a small gift. The meeting was then formally closed by our chairman, David Small.

After breakfast and more farewells it was time for reflection on the weekend and then some touring around Norwich. Much of the camaraderie develops at the bar at these meetings and City College had one of the most gracious publicans of any conference that I can remember. If only she served heather ale. Next year's conference will be held in Cornwall, 10–13 September at St. Michael's Hotel, Falmouth. Yes it is a little posher than usual and yes, it is a little far down, but the meeting will be richer for all, if you make plans now to attend.

The Mustard Museum was a joy and among other things I learned that girls and women filled the small cans and boxes of mustard as their fingers were more nimble, and boys and men filled the larger sized units. I met other Heather Society members at the cathedral (another joy of attending conferences are the places that can be visited before and after). Horatio Nelson attended the Grammar School in the precinct. The cathedral has one of the few remaining apses in Britain and the largest cloister. Also great tea and scones. See you in Falmouth in September 99.

WALTER K. WORNICK

BOOK REVIEWS & RECENT PUBLICATIONS

SMALL, D. & SMALL, A. 1998. *The Heather Society's Handy guide to heathers.* (1998/99 edition). Pp 168; illustrated; limp covers. £11 (p. & p. included). ISBN 0-9519160-1-7. Creting St Mary, Ipswich: Denbeigh Heather Nurseries for The Heather Society.

The authors of this book encapsulate its purpose admirably in the first paragraph of the introduction which I reproduce verbatim. 'The purpose of this book is to provide a handy reference to descriptions of garden varieties (cultivars) of heathers in the genera *Andromeda*, *Calluna*, *Daboecia* and *Erica* which are commercially available worldwide. It also includes synonyms and errors which are in use.'

This is evidently a much revised second edition and the rate of progress in research and scholarship in the "heathers" has evidently been very rapid, to have justified issuing a new edition six years after the first.

The book is very well produced in all respects, spiral bound to lay flat and with both maps and colour plates of some well chosen cultivars, together with a Heather Society colour chart which will be of considerable use to aficionados of hues and shades. The chart also has references to RHS colour chart numbers which may be quite useful when describing heathers to non-specialists. The location maps of the three collections at Wisley, Harlow Carr and Cherrybank also include planting reference plans. The planting reference plans and the colour chart fold out for ready use in the garden. As a footnote on every page, there are metric and Imperial measurement equivalents.

I was particularly pleased to see a section devoted to hardiness zones with information on the US Department of Agriculture guide and the less extensive *European Garden Flora* system. The coloured maps on page 4 are excellent, showing the USDA zones as applied to both the continental USA and Western and Central Europe. The general information here includes a mention of the importance of environmental factors such as microclimate, soil type and day-length, which is to be applauded.

Each of the four genera included in this guide is then given a biogeographical description and a distribution map (sometimes for each species) (apart from *Andromeda*). A generic description, including morphological, floral and phenological information is followed a brief ecological note and recommendations about hardiness.

For each of the above genera, each individually named cultivar is described in formulaic detail – height, spread, flower colour (usually including The Heather Society shade code), and a brief description of the mature plant and any special features or interest such as its origin or any remarkable progeny. Commercial sources are identified by means of a code number and letter and the correct planting reference for each of the collections is given.

The suppliers' names and addresses (at the back of the book) have been regionalised and it is good to see that some European, Australasian and North

American companies are listed, with an indication for each whether mail order, retail or wholesale supply is available. Following these is a short but useful glossary of terms. The book is attractively produced and Brita Johansson's cover design is first class.

So far, so good - so what might be missing? Some useful references on the ecology of heathers such as the relevant British Ecological Society's Biological Flora accounts or Charles Gimingham's excellent book on the *Ecology of heathlands* (a little old now, but still valuable (Gimingham 1972)). Similarly, *Heaths and moorland: cultural landscapes* (Thompson *et al* 1995) contains a wealth of information on the habitats and the plants which would be of great interest to the more ecologically minded enthusiast.

What happened to the other attractive members of the Ericaceae like *Phyllodoce* or *Cassiope* whose incredibly beautiful or colourful flowers are a feature of many heather beds (including my own) - and what about that spectacular inter-generic hybrid \times *Phyllothamnus erectus*? Was it lack of space, or possibly that few people know about them? These are relatively minor criticisms and the points raised do not seriously detract from the purpose and solid achievement of the book which provides so much information on 1100 cultivars.

I can legitimately refer to this book as being a treasure-trove of information from which the most fascinating snippets can be picked out - for example, the derivation of the name *Calluna* or the origin of a particular cultivar and its horticultural name. The authors deserve a great deal of thanks for all the hard work they have put into this book from all Callunatics and Ericophiliacs, and so do all those who have contributed in other ways. This is truly a book which will be regarded by all who use it as a classic for many years to come.

What makes the authors' achievement even more exciting is that it was produced almost entirely 'in house' by them and is an excellent example of home publishing. Its presence on the Internet is to be welcomed and I hope that The Heather Society gains even more members as a result of this exposure

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PADDY COKER

THE RHS PLANT FINDER. 1998-99 The Plant Finder Reference Library.

CD-ROM. Standard version £25, ISBN 0-9530048-1-3. Professional version £70 ISBN 0-9530048-2-1. The Plant Finder, 10 Market Street, Lewes, East Sussex BN7 2NB.

This is a compilation of gardening databases and information on a CD-ROM. At the heart of the compact disk is an electronic edition of *The RHS Plant Finder 1998-99* but that formidable work is vastly complemented with other information, not least by a Heather Society database which refers to 3,250 cultivars.

The CD-ROM is designed for use with Microsoft Windows software and IBM-PC compatible machines with 20MHz 386 chips or better. It can be run directly without installing "run" software on the hard disk, though this option is also available. I chose the former option and it worked very smoothly and quickly on my P233 machine. The software provides an attractive presentation of menus and task bars such that even computer novices should find the program easy to use. In fact I thought it fun and enjoyed reviewing the disk.

A computerised version of *The RHS Plant Finder* is the main work on the CD-ROM. This is a full, up-to-date version of the book containing over 70,000 references to plants and their suppliers. Descriptions of the plants are not given. Looking up plants or suppliers is easy and quick, either by browsing through an index or keying in a plant name. A dictionary of common names can be accessed simultaneously and this aids selection when searching for a half remembered Latin name.

I tested the database using my knowledge of heathers. The five genera that constitute heathers are well represented and some South African heaths are included. As well as the names of commercially available plants, the list includes synonyms, invalid names, and items deleted from the current edition of the book, but it is still impressive at 1,271 references. Putting this in perspective, there are about 1,020 hardy heathers in the national collection at Royal Horticultural Society's Gardens, Wisley, and the whole of western Europe was scoured to find them. Related genera such as *Cassiope* and *Phyllodoce* are also well represented.

The suppliers listed include some well-known nurseries such as Denbeigh Heathers, Barncroft, Jack Drake, Bridgemere and Okells. But others familiar to Heather Society members are not in the list.

There is excellent cross-referencing between *The RHS Plant Finder* and two other databases – *The Seed Search* and the *Arboreta and Gardens Guide*. So, for example, from referencing a plant such as *Erica australis* to find a supplier, one can go with a touch on a task-bar icon to a supplier of seeds or a garden where specimens can be seen growing. This is a very powerful feature which brings a considerable amount of information to the fingertips.

The Seed Search 1998 is a database of 33,000 references, and the *Arboreta and Gardens Guide* gives the sites of 30,000 plants at four English arboreta and 20 Scottish National Trust gardens. I found *The Seed Search* particularly interesting. It gives British and overseas suppliers of common and some rare seeds. I shall be making personal use of knowledge gained from this list!

There are six more databases and lists, including *The Fruit and Veg Finder*, *National Plant Collections 1998*, *Lexicon of Latin Names* and a list of UK and International Garden Societies. The Heather Society is named in the latter. There are several other features including an *Internet Directory for Botany* – a useful tool for those on the "Net".

There is a professional edition of *The RHS Plant Finder Reference Library*, which is aimed at those with scientific or commercial interests. It has all the features of the standard edition plus eight more databases including *PPP Index* (a "plant finder"

covering 16 European countries including the UK), *Plantenvinder 1997/8* which lists 45,000 plants and their suppliers in the Netherlands, *Gardening by Mail* (a list of US and Canadian mail order suppliers) and a list of UK plant wholesalers.

Another feature of this edition, cultivar registers, has a list of international registration authorities including The Heather Society. The database also has seven lists of cultivars, one of them provided by The Heather Society. This list of heathers contains 3,250 references for which the Society's international register database and Anne and David Small's *Handy guide to heathers* are sources.

This compendium of gardening information on a slim compact disk replaces a whole shelf full of books. But what most impresses me is the slick and user-friendly software which makes access to the data even easier than using books, and the data easier to use when it has been accessed.

Most gardeners would I believe find the standard version sufficient for their needs and good value at £25. The professional one costs £75. However, anyone wanting only to find and select heathers for his garden could hardly do better than to buy a copy of the *Handy guide to heathers*.

ALLEN HALL

SUE PHILLIPS. *Heathers and conifers*. Pp 96; illustrated; hard covers. £ 5.99. ISBN 0-94779-321-6. London: Aura Books

DIANE JONES. *Conifers and heathers*. Pp 96; illustrated; soft covers. £ 1.99. ISBN 1-901683-11-7. London: Aura Books

Mixing these two sorts of plants has been in disfavour for some time now. All the more surprising to find two books on this subject coming from the same publisher in successive years, each subtitled "Step-by-Step" Garden Guides, each doing a competent job.

The earlier is much the larger, 26 x 14 cm. It concentrates on ways to grow and display these plants with numerous large illustrations, e.g. in hanging baskets, terracotta pots with holes in the side etc. Heathers take only a third of the book. A number are illustrated full-grown and untidily, including *Calluna vulgaris* 'Alexandra', *Erica carnea* 'Rosalie' and *E. cinerea* 'Summer Gold'.

Unwillingly following publisher's instructions, heathers take even less space in Diane's book, the pages here a neater 20 x 15cm. But she gives experienced advice and covers a wider range, including *E. x griffithsii* and *E. x oldenburgensis* and illustrates *E. manipuliflora* 'Aldeburgh', *Daboecia cantabrica* 'Cupido', *E. erigena* 'Ewan Jones' and *E. x griffithsii* 'Heaven Scent'. She sets out *C. vulgaris*, *E. carnea* and *E. cinerea* which have the Award of Garden Merit, but not the other species. Perhaps space cut them out? She alone mentions the Society. This is the book for you.

D. McCLINTOCK

MIKOLAJSKI, A. 1997. *Heathers*. (The new plant library). Pp 64; illustrated; hard covers. £5.95. ISBN 1-85967-514-X. London: Lorenz Books.

This very attractive book covers almost everything that anyone with an interest in the subject could wish to know. It begins with a section on the history of heathers followed by some mouth-watering pictures of heather gardens. All the main species are well described and beautifully illustrated, as are the sections on cultivation, planting, pruning and propagation. There is a useful list of recommended heathers and even help on what to look for when buying your plants. Helpful advice is given on growing heathers in raised beds, containers and baskets and for indoor decoration. Problems with pests and diseases are also clearly dealt with.

This is a well produced and comprehensive book, and at £5.95 in hardback is superb value for money [a soft-backed edition has now also been published]. The plentiful illustrations and the wealth of good advice will encourage the novice and expert alike. The author is a gardening writer who has been involved with many prestigious publications, such as the *RHS encyclopaedia of plants and flowers* and the *RHS encyclopaedia of gardening*, and with the Society's Chairman, David Small, acting as consultant, we can be sure that the book's authenticity can be relied upon.

DAPHNE EVERETT

ROCHEFOUCAULD, B. de la. 1997. *La bruyère. Choix des variétés, culture, association*. Pp 128; illustrated; hard covers. No price indicated. ISBN 2-84038-213-X. Paris: Éditions Rustica.

This is a revised, greatly expanded and substantially updated edition of de la Rochefoucauld's guide to heathers, with hard covers, some splendid new photographs, and of course countless new cultivars. Cultivars are given "stars" to indicate their performance in gardens both in France – the Comte and Comtesse de la Rochefoucauld's own garden at Ingrannes, and that of André Dauguet at Larchamp – and 'les tests effectués par la Heather Society en Angleterre ...'. Another symbol indicates plants with coloured foliage.

This is an invaluable compendium on heathers for French-speaking gardeners, and the prominent references to The Heather Society (including our seemingly ubiquitous Chairman – how many other books has he collaborated on?) should help to increase our overseas membership. Indeed given that the cultivars are graded according to the author's own experience this work would provide valuable ideas for other gardeners in other continental countries.

My only reservations concern the rather wishy-washy illustrations of the species which in some cases (e.g. *Erica tetralix*) are hardly recognizable, and the extraordinary maps, most of which are wildly inaccurate (for accurate maps, the *Handy guide to heathers*, reviewed above, is recommended). Yet these are relatively minor complaints that most gardeners will be able to lay aside.

In short, *La bruyère* is a handsome and valuable guide to heathers in gardens.

E. C. NELSON

D. McCLINTOCK & M. BLAMEY. *Heathers of The Lizard*. Pp 8 + limp covers; illustrated. £ 1. 50. (p. & p. extra). ISBN none. The Cornwall Garden Society (no address printed, but available through The Heather Society).

This slim pamphlet recounts the history of The Lizard's heathers, the most notable being *Erica vagans*, Cornish heath. The species' discovery and the stories of its cultivars are recounted in our President's own, distinctive manner. There is a lot of detail crammed into the booklet, especially about the individual plants of the endemic hybrid between Cornish heath and cross-leaved heath (*E. tetralix*), *E. x williamsii*, but very little that is new. The other heathers get short shrift, which is a pity since they too form part of the marvellous heathland of that peninsula.

The centre-fold is a series of rather stilted illustrations of the heathers, including the botanical monstrosities *E. vagans* 'Viridiflora', and *E. vagans* f. *anandra*, and the hybrids *E. x williamsii* and *E. x watsonii*.

Anyone visiting The Lizard – including delegates at our 1999 Annual Conference in Falmouth – will enjoy this booklet, especially if they are single-minded pursuers of *E. x williamsii* plants.

E. C. NELSON

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- JULIAN, A. 1997.** Heather group. *Northern gardener* (October): 123.
Visit to Harry Ramsden Garden at Leeds; David Small's gift of two thousand *Calluna* plants to Harlow Carr.

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Account of Don Richards' garden at Rydal Mount, Eskdale.
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- MacDONALD, S. 1998.** Hardy symbol of a resilient race. *The Times (Ticket to Scotland)* (9 January): 15
A general account, no cultivars.
- MACKENZIE, D. G. 1977.** *Perennial ground covers*. Portland, Oregon: Timber Press.
Andromeda (p. 68); *Calluna vulgaris* including 'Plena Multiplex' (pp 92-93); *Erica carnea*; *E. x darleyensis*, including 'Med Pink'; *E. tetralix*, including 'Nana'; *E. vagans* (pp 141 - 143); all betraying American origin.
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- NELSON, E. C. & GRILLS, A. 1998.** *Daisy Hill Nursery, Newry: a history of 'the most interesting nursery probably in the world'*. Belfast: Northern Ireland Heritage Gardens Committee. ISBN 0-9522855-6-8. £ 17. 50 (p. & p. included from NIHGC, PO Box 252, Belfast BT9 6GY)
Greatly expanded version of Nelson (1997, *The new plantsman* **4**: 98-114), including histories of cultivars of *Calluna* (7 cvs, pp 82-84), *Daboecia* (4 cvs, pp 92-93) and *Erica* (4 spp., 17 cvs, pp 102-105) introduced by this now-extinct nursery formed in the 1880s by Thomas Smith of Birmingham. Includes photograph of heathers in the nursery, and much more besides.
- OJEDA, F. 1998.** Biogeography of seeder and resprouter *Erica* species in the Cape Floristic Region. Where are the resprouters? *Biological journal of the Linnean Society* **63**: 331-348.
Maps and lists those with each form of regeneration, plus a mixed group.

- OLIVER, E. G. H. & OLIVER I. M. 1998. Three new species of *Erica* (Ericaceae) from South Africa. *Novon* 8: 267–274.
Erica cabernetiae, *E. cedromontana* and *E. navigatoris* described.
- POWER, S. A., ASHMORE, M. R., COUSINS, D. A. & SHEPPARD, L. J. 1998. Effects of nitrogen addition on the stress sensitivity of *Calluna vulgaris*. *New phytologist* 138: 663–673. Observations of heathers at Thursley Common, Surrey, after use of nitrogen, on frost and drought resistance, heather beetle attack, etc.
- PROCTOR, M., YEO, P. & LACK, A. 1996. *The natural history of pollination*. (The New Naturalist series). London: Harper Collins.
 A new edition of a classic book on pollination, with new colour photographs and updated text. Many references to *Calluna*, *Erica* and other Ericaceae. Paperback issue is excellent value.
- RIBA, M. 1997. Effects of cutting and rainfall patterns on resprouting vigour and growth of *Erica arborea* L. *Journal of vegetation science* 8: 401
- RICH, T. C. G. & JERMY, A. C. 1998. *Plant crib* 1998. London: Botanical Society of the British Isles.
 Excellent guide for the identification of difficult plants. *Erica ciliaris*, *E. tetralix* and *E. x watsonii* (with diagrams, by S. B. Chapman, pp 132–133), and *E. mackaiana*, *E. tetralix* and *E. x stuartii* (by L. van Doorslaer & M. Sheehy Skeffington, p. 134); also *Empetrum* and *Vaccinium*.
- SAYERS, D. 1997. Terra Nostra. *The garden* 122 (12): 846–849.
 Restoration of an 18th century garden on São Miguel in the Azores, which now includes a section planted with Azorean endemics, including *Daboecia azorica* (illustrated).
- SCANNELL, M. J. P. [& DEEVY, P.] 1997. Inspired by lichens ... Matilda Knowles (1864–1933) ..., in Mulvihill, M. (editor) *Stars, shells and bluebells. Women scientists and pioneers*. Dublin: WITS
 Matilda Knowles refound A. G. More's Carna population of *Erica mackaiana*; this is mentioned in course of a biography.
- STARLING, B. 1998. Souvenirs of the Azores. *The garden* 123 (2): 121.
 Notes on Azorean species, *Daboecia azorica* and *Erica scoparia*, growing in his gardens in Essex and Devon (a response to D. Sayers' article; see above).
- THOMAS, C. 1997. Shrubs for tubs. Winter Interest. *Gardeners world* (December): 27.
 Heathers effective on their own or mixed.
- VILA, M. 1997. Effect of root competition and shading on resprouting dynamics of *Erica multiflora* L. *Journal of vegetation science* 8: 71–80
 — 1998. Neighbour effects on *Erica multiflora* (Ericaceae). *Acta oecologica* 19: 139–146.
- WALTER, K. S. & GILLET, H. J. (editors). 1998. 1997 IUCN Red list of threatened plants. Gland & Cambridge: The IUCN Species Survival Commission. ISBN 2-8317-0328-X.
 924 pages listing the world's threatened species and subspecies, including *Daboecia azorica* (officially designated R = rare), and a host of *Erica* species, including *E. alexandri* subsp. *acockii* (Ex = extinct), *E. ixanthera* (Ex), *E. pyramidalis* (Ex), *E. turgida* (Ex), *E. velitaris* (Ex) and *E. verticillata* (Ex). European species listed are *E. andevalensis* (E = endangered), *E. bocquetii* (R), *E. maderensis* (R), *E. scoparia* subsp. *azorica* (V = vulnerable) and *E. scoparia* subsp. *platycodon* (V). 14% of the entire Ericaceae are threatened, 509 species.
- WODWARD, J. 1998. Summer keeps a welcome in the hillsides. *The Yorkshire post* (31 August).
 With very fine picture (by Bruce Rollinson) of moorland heather in Swaledale.

CULTIVAR AND SPECIES NOTES

CULTIVARS REGISTERED TO 31 DECEMBER 1998

146. *Erica cinerea* 'Sun Cushion'

Registered 20 January 1998: P. Glass, Carn Nurseries, 58 Tirkane Road, Maghera, Co. Derry BT46 5AG, Northern Ireland.

Compact spreading habit, to 20cm tall, to 70cm wide; foliage golden in Summer deepening to orange in winter; flowers rose-pink (H7), July to November.

Sport on *E. cinerea* 'Pink Ice' found in 1992 at Carn Nurseries by Pat Glass, originally given the illegitimate name *E. cinerea* 'Golden Wonder'.

147. *Erica cinerea* 'Anita Lillie'

Registered 24 August 1998: Mrs A. L. Austin, 68 Birch Road, Headley Down, Bordon, Hampshire GU35 8BW, England.

Compact spreading habit, to 15cm tall, to 30cm wide, stems red ageing to brown, glabrous; new foliage pink in Spring turning yellow then red, mature foliage light green in Summer, mid-green at other seasons; flowers in racemes to 5cm long, magenta (H14), pedicels red, June to August.

Sport on *E. cinerea* 'Purple Beauty' found in 1995 at Summerhill Nursery, Frensham, Surrey, England, by Mrs Anita Lillie Austin.

148. *Daboecia cantabrica* 'Celtic Snow'

Registered 14 September 1998: D. McLaughlin, 51 Glenpark Road, Omagh, County Tyrone BT79 7SS, Northern Ireland.

Prostrate spreading habit, to 7cm tall, to 45cm wide, stems light green, hoary ageing to brown, glabrous; new foliage light green throughout the year, mature foliage mid-green throughout the year; flowers white, in one-sided racemes to 3.5cm long, pedicels light green, July to October.

Collected by D. McLaughlin on Sky Road, Clifden, Co. Galway, Ireland, in August 1991, and propagated by him. He has distributed this cultivar.

149. *Daboecia cantabrica* 'Chaldon'

Registered 31 October 1998: J. Gilbert, 17 Heathway, Chaldon, Caterham, Surrey CR3 5DN, England.

Open erect habit, to 40cm tall, to 65cm wide, stems red, hoary, ageing to brown, hoary; new foliage mid-green in spring, dark green at other seasons, mature foliage dark green throughout the year; flowers globose, almost spherical, deep ruby (H5), in one-sided racemes to 5cm long, pedicels beetroot (H9), sepals beetroot (H9), June to October.

Seedling in the garden of J. Gilbert and named after his local village.

150. *Erica tetralix* 'Achill Gold'

Registered 7 November 1998: E. C. Nelson, Tippitiwitchet Cottage, Hall Road, Outwell, Wisbech, Cambridgeshire, PE14 8PE, England.

Low-growing, somewhat sprawling, about 10cm tall. Foliage sometime plain green, some leaves pale yellow, others yellow underneath or yellow at tips, yellow colouring appears on sides of shoots but not in any regular manner but looking as if the shoots are "sun burnt". Leaves small, largest to 0.4cm long, less than 0.1cm across, with tightly recurved margins so that lower surface is not visible, with woolly hairs on upper side, without marginal cilia or with a few only towards tip. Hairs not glandular. Stems with short woolly hairs. Flowers small, lilac pink above (H11), fading almost to white underneath.

Collected by Aidan Brady on Achill Island, Ireland, in August 1969, and since then cultivated at the National Botanic Gardens, Glasnevin, Dublin.

151. *Erica tetralix* 'Arriba'

Registered 7 November 1998: E. C. Nelson, Tippitiwitchet Cottage, Hall Road, Outwell, Wisbech, Cambridgeshire, PE14 8PE, England.

Bushy, upright plant that will probably reach over 0.5m tall if not trimmed. Foliage grey-green. Leaves to 0.5cm long, to 0.2 cm broad at base, obovate, tapering gradually towards tip, with numerous long, glandular cilia, and woolly short hairs on upper side, margins not fully recurved so that lower surface is visible (sinus about 0.1cm wide), lower surface white. Young shoots appearing white, covered with woolly short hairs and long cilia; older shoots tinged pink, later pale brown. Flowers large, 0.7 cm long, amethyst above (H1), paler underneath, with prominent ruby (H5) recurved lobes, about 10 in each large cluster.

Collected by D. McClintock, E. C. Nelson and D. J. Small at Brandonas de Arriba, northwest of Santiago de Compostela, La Coruña, Spain, in July 1982.

152. *Daboecia cantabrica* 'Pink Lips'

Registered 11 November 1998: A.P. Dome, 4832 54th Avenue South, Seattle, Washington 98119-1517, USA.

See pp 31-35.

153. *Daboecia* x *scotica* 'Seattle Lilac'

Registered 11 November 1998: A.P. Dome, 4832 54th Avenue South, Seattle, Washington 98119-1517, USA.

See pp 31-35

154. *Calluna vulgaris* 'Gloucester Boy'

Registered 12 November 1998: L. Campbell, Merle, Kilmore, by Oban, Argyll, PA34 4XX, Scotland.

Vigorous upright plant reaching 0.6m tall spreading to 0.85m. Foliage dark green tipped magenta in autumn. Very long inflorescences, typically 25cm, with distinctive ruby stems which fade to a dark warm grey-brown by spring. The pale amethyst (pale H1) flowers shade to pink (H8) at the base and appear between August to September.

Sport on *Calluna vulgaris* 'Robert Chapman' found in 1993 at the above address by Lindsay Campbell.

CULTIVAR NAMES RECORDED IN 1998

Andromeda polifolia 'Blue Ice'

Name registered with Canadian Ornamental Plant Foundation in December 1993 by Walter Van Vloten Nurseries Ltd., Pitt Meadows, British Columbia, Canada.

ref: COPF Broadleaf evergreens *Andromeda polifolia* 'Blue Ice' [leaflet].

Andromeda polifolia 'Choay'

syn: *Andromeda polifolia* 'Choay Red'

Collected on Honshu Island, Japan and given to Grandridge Nursery, Issaquah, Washington, USA, by Uikio of Japan.

Calluna vulgaris 'Bonne's Darkness'

Sport on 'Darkness' found by Boomkwekerij Bonne-Versluys, Kaprijke (Lembeke), Belgium by 1998.

ref: *Ericultura* **111**: 13 (1998).

Calluna vulgaris 'John Denver'

commercial synonym of 'Marleen Select'

ref: *Ericultura* **111**: 13 (1998).

Calluna vulgaris 'Kontrast'

Sport on 'Long White' found on the nursery in 1991. It has dark bronze-coloured foliage with white flowers, September to October.

ref: *Baumschule H. Hachmann, Barmstedt, Schleswig-Holstein, Germany catalogue* 1998-2000.

Calluna vulgaris 'Larissa' [established here]

Sport on 'Alexandra', found by Wolf by 1997 with even more red flowers. Named by Kurt Kramer, Edewecht-Süddorf, Germany.

Calluna vulgaris 'Sandy' [established here]

A yellow foliated sport on 'Melanie' found in the nursery of Marohn & Häger in 1995.

Erica carnea 'Eva'

Raised at Bullenkuhlen, Schleswig-Holstein, Germany by D. Lohse by 1995.

ref: Baumschule H. Hachmann, Barmstedt, Schleswig-Holstein, Germany catalogue 1998-2000.

Erica carnea 'Harold Copeland' [not established]

A name given to an existing, but unidentified, cultivar by G. & E. MacKinnon, Waquoit, Cape Cod, Massachusetts, USA by 1998.

Erica carnea 'Rubinfeuer'

Raised at Bullenkuhlen, Schleswig-Holstein, Germany by D. Lohse by 1995.

ref: Baumschule H. Hachmann, Barmstedt, Schleswig-Holstein, Germany catalogue 1998-2000.

Erica carnea 'Rubinschimmer'

Raised at Bullenkuhlen, Schleswig-Holstein, Germany by D. Lohse by 1995.

ref: Baumschule H. Hachmann, Barmstedt, Schleswig-Holstein, Germany catalogue 1998-2000.

Erica carnea 'Sarolyn' [established here]

A golden foliated sport on 'Springwood White' named after Sally Sayles, a nursery worker at G. & E. MacKinnon, Waquoit, Cape Cod, Massachusetts, USA by 1998.

Erica cinerea 'Paul's Purple'

Collected near Limburg, Belgium in 1983 by P. Pacilly, Alphen, Netherlands.

ref: *Ericultura* 111: 13.

Erica x darleyensis 'Swiss Beauty' [established here]

Sport on 'Silberschmelze' in 1985 by H. Brégeon, Vand, Switzerland; believed to be a tetraploid with larger, fertile flowers.

Erica x darleyensis 'Valerie Bey' [not established]

Seedling from 'Swiss Beauty' found by H. Brégeon, Vand, Switzerland.

Erica x griffithsii 'Jacqueline' [established here]

Sport on 'Heaven Scent' by 1997 by C. Kampa, Chobham, Surrey, England with cerise (H6) scented flowers.

NEW ACQUISITIONS

Calluna vulgaris

'**Ardbeg**' [new name, established here]

Introduced by David Hutton, Perthshire, Scotland and named after a village in Argyll & Bute, Scotland.

Habit erect; foliage yellow-orange in summer becoming more green in winter; flowers single, lilac, August to September.

'**CaJo**' [new name, established here]

Raised at Vargön, Sweden, by Brita Johansson and named after her husband, Carl-Erik Johansson.

Habit low, spreading; foliage yellow-green with terracotta tips to spring foliage later light green, flowers white with lilac tint, August to September. Hardy in Sweden.

'**Whinfell**' [new name, established here]

Seedling found by John Bell, Whinfell, Cumbria, England by 1998.

Habit erect, 40 cm tall; foliage light green tipped cream and pink in spring; flowers pale purple, September to October.

'**Whinfell White**' [new name, established here]

Sport on 'Kinlochruel' found by John Bell, Whinfell, Cumbria, England by 1998.

Habit low, spreading, 25 cm tall; foliage light green tipped cream in spring and early summer; flowers double, white, August to October.

Erica tetralix

'**Eileen**' [new name, established here]

Sport on a green foliaged seedling found by John Proudfoot, Almondell Nursery, Methven, Perthshire, Scotland and named after Eileen Petterssen of Norway.

Habit broad, foliage deep gold in spring and summer with salmon pink tints later.

compiled by J. PLATT

Fern Bank, 176 Southport Road, Ulnes-Walton, nr Leyland, Lancashire PR5 3LN
with additional information from D. J. SMALL

NEW SPECIES

Erica cabernetea E. G. H. Oliv. *Novon* 8: 267–274 (1998).

E. cedromontana E. G. H. Oliv. *Novon* 8: 267–274 (1998).

E. navigatoris E. G. H. Oliv. *Novon* 8: 267–274 (1998).

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All material for the 2000 issue of the *Yearbook of the Heather Society* must reach the Editor not later than 31 October 1999.

Articles may be submitted by e-mail.

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YEARBOOK OF THE HEATHER SOCIETY

1999

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Erica hanekomii E. G. H. Oliver